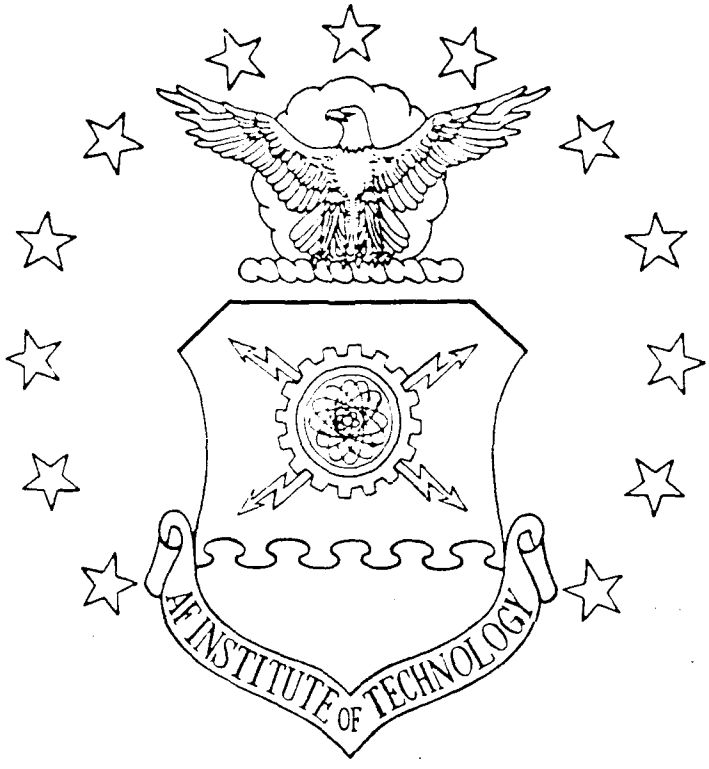

AN ASSESSMENT OF THE FACTORS WHICH DETERMINE THE CAREER PROGRESSION OF AIR FORCE TRANSPORTATION OFFICERS

THESIS

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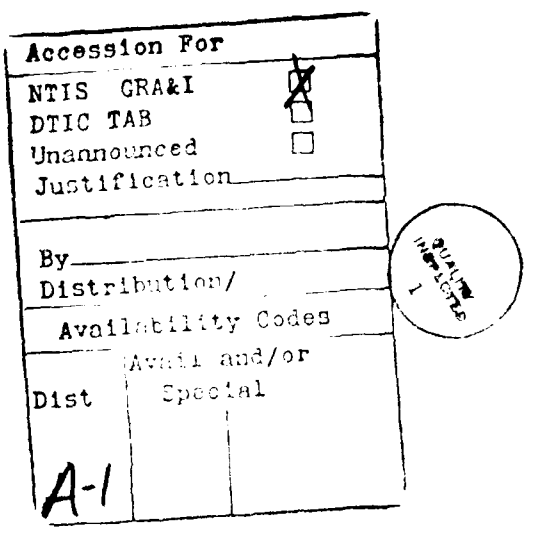

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THESIS

Presented to the Faculty of the School of Systems and Logistics of the Air Force Institute of Technology Air University In Partial Fulfillment of the Requirements for the Degree of Master of Science in Logistics Management

David R. Pierce
Captain, USAF

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I take this opportunity to recognize three groups of people, without whose help I would not have succeeded in completing this thesis. These groups being: 1) the Delphi panel members; 2) my thesis advisor and reader; and 3) my family.

The first group to be recognized is the 24 panel members who participated in the two-round Delphi procedure performed in this thesis. Although an anonymous part of this thesis, their estimates and comments provided great insight in determining the variables considered as important when looking at the career progression of transportation officers.

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To all three groups, I express my appreciation.

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Abstract

The main objective of this research was to determine the factors which are important to the career progression of transportation officers. With these factors identified, the "value added" to an officer's career by attending the Air Force Institute of Technology (AFIT) Graduate Transportation Management (GTM) program can be determined by comparing AFIT and non-AFIT transportation graduates.

This problem originated from the USAF Director of Transportation (HQ USAF/LET) seeking an overall strategy for transportation education to follow in the 1990s and beyond. To fulfill one area of transportation education, AFIT was asked to provide an overall strategy for the GTM program.

To work toward answering such a broad problem, three areas of research were suggested by HQ USAF/LET for initial research. This study provides the initial research on one of these questions, "How have the careers of past GTM graduates progressed since attending AFIT?"

An initial list of factors was identified through a review of literature. The importance of these factors was measured and additional factors added through a two-round Delphi procedure with a panel consisting of 24 senior transportation officers.

The factors, identified from this research, took a backseat to examining the change that has occurred in Air Force philosophy from the "whole person" concept to the "job performance" concept. This change was stressed by the panel members as the number one factor when considering the career progression of transportation officers. Other factors identified as important in the career progression of transportation officers became factors which either affect job performance or relate to job performance.

With the factors important to the career progression of transportation officers identified, the "value added" to career progression by attending AFIT can be assessed. This assessment can be performed through a comparison of the factors between AFIT and non-AFIT graduate transportation officers.

AN ASSESSMENT OF THE FACTORS WHICH DETERMINE THE CAREER PROGRESSION OF AIR FORCE TRANSPORTATION OFFICERS

I. Introduction

General Issue

The Graduate Transportation Management (GTM) program at the Air Force Institute of Technology (AFIT) School of Systems and Logistics has provided Graduate Logistics Management (GLM) degrees in the area of transportation since 1982. Prior to this time, the AFIT sponsored transportation officers received their advanced degrees from the University of Tennessee (15). Since AFIT assumed the responsibility for the Transportation Management Program, there have been studies performed to determine the perceived usefulness of the GLM programs in general, but none performed to specifically determine if the degree has actually helped these transportation officers in their career progression.

USAF Director of Transportation (HQ USAF/LET) is looking for an overall strategy for transportation education to follow in the 1990s and beyond. To fulfill this goal in one area of transportation education, AFIT was asked by HQ USAF/LET to provide an overall strategy for the Graduate Transportation Management program.

To work toward answering such a broad problem, three areas of research were suggested for initial investigation.

These were: 1) How can interest in the GTM program at AFIT be increased to insure a continued supply of officers for the program?, 2) How do the courses offered by the GTM program at AFIT fit the needs of the Air Force?, and 3) How have the careers of past GTM graduates progressed since attending AFIT?

This study provides the initial research for answering the last question, "How have the careers of past GTM graduates progressed since attending AFIT?". The first step was to determine what factors affect the career progression of transportation officers. Senior transportation officers, as defined later in this chapter, were asked to evaluate the importance of factors found to be important during previous studies, and to add factors they considered to be important to the career progression of transportation officers. It is this additional step of asking senior transportation officers to evaluate factors identified as important from earlier studies that keeps this research from trying to establish a "magic formula" by which transportation officers are guaranteed to progress in their careers.

This research is based on the "Relevant Evaluative Criteria" approach. This approach identifies the factors that senior transportation officers evaluate when considering the career progression of transportation officers. It is from these "relevant evaluative criteria" that the "value added" from specific factors, such as the

G.M program at AFIT, may be assessed. With the factors established, it should then be possible to evaluate these factors in the career progression of AFIT graduate transportation officers to determine how the careers of these past graduates have progressed with respect to the expectations of senior leadership.

Determining the factors which are important when examining the career progression of transportation officers is the initial step toward answering the question "How have the careers of past GTM graduates progressed since attending AFIT?" With these factors identified, a comparison of AFIT and non-AFIT transportation graduates can be conducted to evaluate the "value added" to career progression by a transportation officer attending AFIT.

Specific Problem

To answer the question "How have the careers of past GTM graduates progressed since attending AFIT?", the factors important to the career progression of transportation officers must first be identified. It is with these factors that an initial model can be built and a comparison between AFIT and non-AFIT graduate transportation officers can be conducted to determine if there is "value added" by obtaining a degree at AFIT.

To build this initial model, the factors which senior transportation officers view as being important will be

used. An initial list of factors will be determined from a review of literature. Additional factors will be added as necessary after the original list has been reviewed by the senior transportation officers.

The specific problem then, for this research, is that there does not exist an adequate means by which the careers of past GTM graduates can be evaluated to determine if AFIT has "added value" to their career progression. Identifying the factors important to the career progression of transportation officers is the first step toward assessing the "value added" by obtaining an advanced degree at AFIT.

Research Objectives

The objectives of this research were to determine the factors which senior transportation officers consider to be important to the career progression of transportation officers and to build a model from these factors which best represents the ideal career progression of officers in the transportation career field.

Investigative Questions

The following questions were developed to meet the research objectives:

1. What factors do senior transportation officers consider to be important when considering the career progression of transportation officers?

2. How do the senior transportation officers weight the importance of the factors they consider important in the career progression of transportation officers?

3. Based on the viewpoint of senior transportation officers, what does the ideal model of transportation officer career progression look like?

Scope and Limitations

The scope of this research is limited to determining those factors that senior transportation officers view as affecting the career progression of transportation officers, and developing an initial model with which the "value added" by obtaining an AFIT degree can be identified. This research is not intended as a guideline for transportation officer advancement, but as a tool to identify the factors important to the career advancement of transportation officers with which the "value added" by obtaining a graduate degree at AFIT can be evaluated.

Key Definitions

It is important at this stage to define several key terms used frequently throughout this research.

1. Transportation Officer -- An active duty officer, lieutenant colonel and below, holding a primary Air Force Specialty Code (AFSC) of 60XX, Transportation Officer.

2. Senior Transportation Officer -- An active duty officer who: has had a primary AFSC of 6016, Staff Transportation Officer; has had at least 10 years of experience in the transportation career field; has had command experience sometime during his/her career; and is currently at the director level at a major command or above.

3. Career Progression -- The upward movement in rank and increased responsibility given to transportation officers as outlined in Chapter 1 through 4 and 24 of AFR 36-23, Officer Career Development, and as described by senior transportation officers.

4. AFIT Graduate -- An active duty officer holding a transportation officer AFSC and a graduate degree from an AFIT in-residence program.

5. Non-AFIT Graduate -- An active duty officer holding a transportation officer AFSC and a degree from a non-AFIT sponsored graduate school.

Summary

This chapter outlined the general issue behind performing this research, listed the problem statement and objectives for this research, listed the investigative questions needing to be answered in order to meet the research objectives, and provided the scope and limitations under which this research is being performed. The literature review in the next chapter provides an overview of Air Force officer career development and reviews research methods of past studies in the area of career progression.

II. Literature Review

Introduction

Providing the initial background information for a study of past graduates of the AFIT Transportation Graduate Management Program (GTM), this literature review establishes the need for officers with advanced degrees by reviewing Air Force Regulation (AFR) 36-23, Officer Career Development, and by reviewing other Air Force publications which look at the career development of officers. After the need for obtaining advanced degrees has been established, methods of determining career progression will be reviewed followed by a review of civilian and military studies on the subject of career progression.

Officer Career Progression

The purpose of officer career management is "to properly assign Air Force officers to sustain an effective mission and to develop individual officers to make sure that highly qualified and well-trained officers are available to meet present and future Air Force needs." (7:23). The policy guiding the career development of all officers is outlined in Chapter 1 of AFR 36-23. The process of career development for officers in the transportation career field is outlined in Chapter 24 of AFR 36-23.

Chapter 1 of AFR 36-23 states the philosophies, elements, and responsibilities for officer professional

development. The following paragraphs outline the current policy guiding officer professional development.

The objective of officer professional development is to "prepare an officer for specific and general responsibilities within the defense establishment." (6:8). To do this, the development of officers:

> includes those actions and experiences that enhance an officer's ability to perform his or her job and thereby contribute to the mission of the Air Force as the level of responsibility increases. It begins with concentration on primary job expertise, broadens through the career, at different rates for different officers, and culminates in a generalist with both depth and breadth of experience. (6:8)

The role of professional development is to "gain the necessary depth and breadth of experience to improve performance and potential for increased responsibility. The most important indicator of potential is the way an officer performs daily on the job." (6:8) AFR 36-23 goes on in this section to describe a generic progression of officers through the grade of colonel. Specific items pointed out in this progression are: 1) "The most important career development activity for lieutenants, captains and most junior majors is work that enhances career specific professional competence and provides opportunities to develop leadership abilities."; 2) "Professional military education (PME) and academic education should parallel and support the requirements of appropriate jobs."; and 3) "Advanced academic degrees are important to officer

professional development to the extent that they enhance the degree holder's job and officer qualifications." (6:9)

The role of the Officer Evaluation System (OES) is to act as "an integral part of the Air Force Professional Development program and strongly supports the program's goals and philosophy." (6:9) The OES emphasizes performance by: 1) requiring performance feedback be provided by company grade officers to help them improve their duty performance; 2) basing performance reports solidly on performance and the impact an officer has on the unit's mission; and 3) recommending promotions and evaluating potential based on performance (6:9)

Chapter 24 of AFR 36-23 breaks down a transportation officer's career into three professional development phases with transition points occurring around the 8, 14, and 20 year points (6:101). A copy of the transportation career field professional development chart is located in Figure 1. Within each of these phases, suggested education and training is listed to help officers develop a career progression path by establishing check points by which they can gauge their progress. AFIT is listed in each of the professional development phases under the education and training sections. For the Initial Development Phase (0 through 8 years), AFIT is mentioned for the GTM program and then in later phases is mentioned for the Professional Continuing Education (PCE) courses offered to assist in job

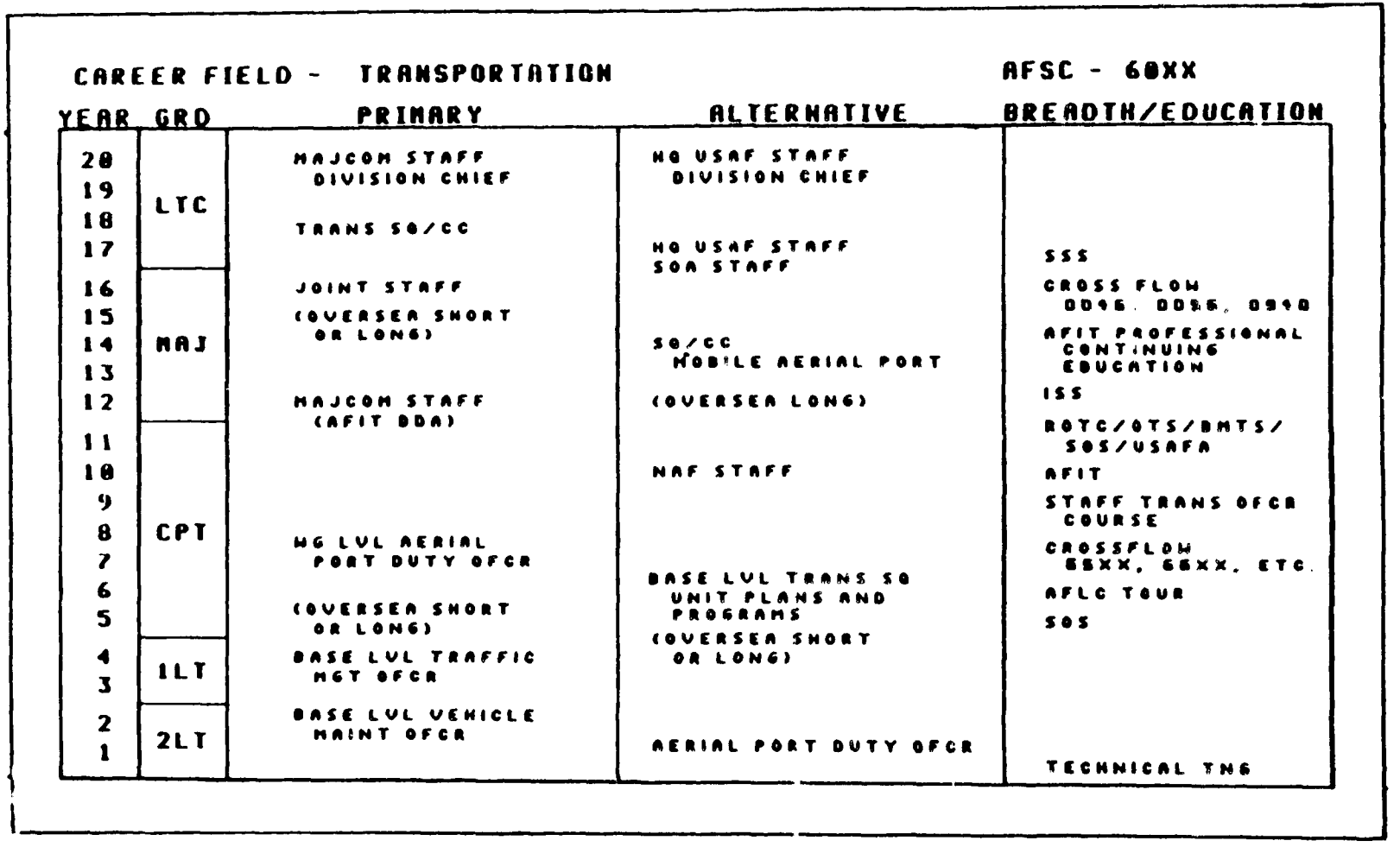

Figure 1: Transportation Professional Development Chart
(Reprinted from 6:103)

performance. AFR 36-23 provides an introduction to AFIT by stating,

> Graduate training in transportation is considered a highly desirable prerequisite for holding a number of key staff positions in transportation. Qualified officers who do not already possess an advanced degree are encouraged to apply for the Air Force Institute of Technology (AFIT) Graduate Program in Transportation Management of Logistics Management. (6:100)

According to the current AFIT catalog, the mission of AFIT is "to provide education to meet Air Force requirements in scientific, technological, managerial, medical, and other fields as directed by HQ USAF" (1:2). The focus of the AFIT mission can be narrowed by looking at the mission of the School of Systems and Logistics, which is "to deliver modern tools and techniques of management to Air Force and Department of Defense customers" (1:161). Finally, under the School of Systems and Logistics, the primary purpose of the Transportation Management option is "to improve the students' skills in the planning, analysis, and management of defense transportation systems" (1:172). Each of these mission statements focuses on the provision of a specialized education to fulfill Air Force needs.

During the Intermediate Development Phase (8 through 14 years), AFR 36-23 is concerned with the placement of AFIT graduates and states "Officers who complete the AFIT Transportation Management Program during this phase should be assigned in positions that will use their graduate training to a maximum" (6:101). For those officers without

a master's degree, a suggestion of attending AFIT is made by stating, "Officers who have not previously earned them should consider pursuing advanced academic degrees, either through AFIT, or through similar off-duty programs." (6:101). In addition to graduate education, AFIT PCE courses are introduced during this phase by stating,

> Officers may compete for nominations through MAJCOMs, to Air Staff, to attend AFIT School of Systems and Logistics Continuing Education Programs. Other AFIT short courses and management training courses may be available as the budget permits. (6:101)

The Advanced Development Phase (15 through 20 years) no longer mentions the AFIT graduate program but turns to continuing education courses and states,

> During this phase officers compete through their respective MAJCOMs, for Air Staff quotas to attend the AFIT Continuing Education Program as well as available AFIT short courses and management training courses as the budget permits. Available courses are listed in AFR 50-5. Special courses are also made available periodically through AFIT at various civilian institutions. Some officers will be selected to attend the AFIT Senior Transportation Executive Development Program. (6:102)

After the three professional development phases comes the Executive Development Phase (20 years plus). AFIT is mentioned for its PCE courses by stating, "Officers should apply to attend available executive short courses. Selected officers will attend the AFIT Senior Transportation Executive Development Program." (6:102).

With the amount of emphasis placed on AFIT through the three professional development phases and the Executive

Development Phase, it can be inferred that AFIT has been designed to meet Air Force requirements. By having such a specialized degree, a graduate of AFIT should benefit in the area of career progression. This is identified during the Intermediate Development Phase with the emphasis on the placement of graduates to utilize the graduate training to a maximum. With the importance of AFIT identified, the "value added" by obtaining a graduate degree from AFIT should be readily measurable.

Identifying Career Progression Potential

With the importance of AFIT identified in the previous section, finding methods of evaluating career advancement was the next step in assessing the "value added" by attending AFIT. From the review of literature in this area, the research conducted by Dr. Edith Sands on the selection of executive personnel provided a thorough discussion of the evaluation methods available.

The career progression of transportation officers is based on the potential they show for higher rank while fulfilling the current needs of the Air Force. This potential was discussed by Edith Sands in her book "How to Select Executive Personnel" in which she looked at determining the applicants with the greatest potential for fulfilling the requirements of a job from a number of

applicants applying for that job (14:97). As stated in the book:

> A candidate's qualifications for a job can be appraised by several different methods, each calling for the use of tests. These examine the person's preparation for the job, his physical fitness for the job, and his ability to perform the job. The tools which assist management in appraising through tests are: (1) the personal history blank, (2) the physical examination, and (3) psychological tests. (14:98)

The following paragraphs briefly cover physical examinations and psychological tests and then focus on the personal history blank.

Physical examinations are "being used by many companies as a method of appraising fitness for executive positions" by ruling out "disabilities or other physical disqualifying factors" (14:103). This type of test, although beneficial in industries where the physical condition of people being interviewed may vary considerably, is not as important in the military where the physical state of the military officer is watched to ensure a specified level of physical conditioning is maintained. The access to medical records presents another problem due to the lack of centralized point of collection for this type of data. The medical records for military personnel are located at the base where the officers are assigned.

The psychological testing of executive candidates "is probably the most controversial of all personnel procedures." (6:109). Psychological tests were first

designed to appraise intellectual aptitude amoung school children. Industry has since become interested in the use of psychological testing to, "aid in measuring human abilities needed in business, in an effort to differentiate between men who will succeed and those who will not, before they are assigned to a job." (14:109-110). Psychological tests have been designed to appraise abilities, aptitudes, and interests, as well as attempt to appraise personalities and motivation (14:110). Dr. Sands states that:

> Many people feel that such tests have no predictive value, yet there are just as many who think that psychological testing can provide a sample of a man's behavior or performance without an expensive tryout on the job. (14:109)

The military does routine psychological testing only on the officers who will be entering career fields such as: Missile Launch Officer, Navigator, Pilot, and Air Weapons Controller. Otherwise, the procedure for entering the Air Force consists of completing the Air Force Officer Qualification Test and Commissioning Physical (16).

The last type of testing, personal history blanks, is "an application form on which the candidate sets down his name and address, his education, his work history, and his military status." (14:98). With this type of test, "many companies consider 'education' and 'work history' as two effective screening factors in discriminating between the promising and the unpromising candidate, since they give the firm an idea of a man's equipment to do the job." (14:98).

In addition to the above mentioned screening factors, a company should analyze previous experience to "look for evidence of the candidate's aspiration level." (14:99). Dr. Sands states:

> This can be estimated from the direction toward which the man kept himself heading. If he has steadily moved upward in terms of higher pay and greater responsibility, there is a strong likelihood that the trend will continue. If the individual has reached the limit of his capacity, says C. Wilson Randle, this too will be revealed in the record of his previous experience. (14:99)

C. Wilson Randle, referenced in the previous passage, is the former Dean of the School of Business, Western Reserve University, now Director of Management Research in Booz, Allen, and Hamilton. Randle considers the selection of executives "a crucial and pivotal function in business." (14:2). History Blanks provide the most potential for use in the military due to the historical records kept on officers in the form of officer briefs and personnel records.

Personal history blanks are being used by a number of companies as a predictive tool to appraise the potential for executive success. According to Dr. Sands, "a number of companies are attempting to find correlations between present success and the early educational, economic, and social backgrounds of their key executives in the hope of isolating some experience common to all." (14:99-100).

There have been both successful and unsuccessful attempts to use personal history blanks as a predictive

tool, but the unsuccessful attempts are overlooked when the possible benefits of using a weighted blank are looked at. The benefits are "it quickly and easily chooses those men who will probably perform successfully on the job." (14:101). According to Dr. Sands, the difficulties arising from the use of such tests comes from their development because:

> ...it takes years of checking and cross-checking hundreds of personnel files for personal history items significantly present in successful employees. It may take another ten years to investigate the validity and reliability of the instrument. Companies which have developed a dependable weighted application blank usually keep the key to its scoring a top secret for fear applicants may try to manipulate the facts of their background to yield a score predictive of success. (14:101)

Dr. Sands continues her description of personal history blanks by stating that "unless data are being gathered for study, there is little justification for using a perscnal history blank which asks for items which seem to bear no definite relationship to the successful performance of a job" (14:99). In addition, "the only excusable reason for a corporation to look into the economic and social background of its candidates is for the purpose of studying such data to improve the predictability of the company's selection program" (14:99). In Dr. Sand's study, some of the items that carried the most weight in different companies' personal history blanks included: 1) work history; 2) education; 3) age; and 4) sex (14:101).

There are three precautions, as stated by Dr. Sands, that need to be observed in order to prevent problems when using personal history blanks. The first precaution that should be observed when using weighted application blanks is that each blank is specific not only to the job but to the company that developed it. When using a weighted application blank, periodic reviews should be performed to validate the blank as to how predictive the factors are and to the values assigned to these factors. Correlation studies are necessary to investigate the validity of these factors (14:102).

The second precaution that should be observed concerns traditional (non-weighted) types of applications. Dr. Sands states, "a company errs if it over emphasizes previous work history to the exclusion of other considerations." (14:102). Furthermore, Dr. Sands states,

> "Experience" and "Ability" are not necessarily synonymous. An applicant who offers a chronological listing of past jobs as an indication of his experience is in reality presenting a list of past dissatisfactions. There is much more to be gained by considering what a man can <u>do</u> rather than only looking at what he <u>has done</u>. This approach investigates the quality of the candidate's previous employment rather than just the amount of his experience. A simple record of jobs held has little value in predicting an individual's potential to contribute to company goals. (14:102-103)

The final precaution is a periodic review of the personal history form being used. This periodic review is necessary due to the fact that "certain items may have to be

deleted because of changes in the legislation concerning discrimination in hiring practices, for example." (14:103).

In reviewing the three groups of tests used for determining the potential of an applicant to fulfill the requirements necessary in a position, it was noted that the first two tests would not be suitable for tracking transportation officers. In the area of physical examinations, all military officers have standards they must meet and any medical problems found may automatically remove them from the career field. The second type of test, psychological testing, is only used for the Missle Launch Officer, Navigator, Pilot and Air Weapons Controller career fields, eliminating transportation officers from being required to have an evaluation performed. The last test, personal history blanks, has the most potential for use in military studies due to the amount of historical data that is kept on transportation officers in officer briefs and personnel records.

After a review of career progression potential, the next section reviews civilian and military studies which utilized history blanks. The focus in the next section is on seeing how others have obtained data on people and to find out how they utilize this data to predict individual's potential to contribute to company goals. The goal of providing a literature review in this area is to identify factors that were found to be important from previous

studies and to get an indication of how a model can be developed from the factors identified.

Review of Past Career Progression Research

Three studies were chosen for comparison in this part of the literature review. These studies were selected for the problems they were researching, the methodology used, and the findings produced from the study.

The first study was one performed by the American Telephone and Telegraph Company (AT&T) to identify career potential in people they were hiring (3:68). The second study was a thesis written by Captain Cady on the development of a guide for the career progression plans of civil engineers (4:3). The third study is a thesis written by Captains Knight and Williams concerning the career progression of graduates of the School of Systems and Logistics Graduate Logistics Management Program (9:8-9).

In the study performed by AT&T, the objectives of interest were, "How accurately can progress in management be predicted?" and "What are the important indicators and how are they best measured?" (3:5). These two questions were listed as additional objectives to the research because, "Although the Management Process Study was conceptualized as a study of development, it was inevitable that the study would have implications for selection of managers." (3:5).

The AT&T study methodology was guided by several considerations. First, the subject's "abilities, motivation, and other characteristics when first measured would be those brought with them to management, uninfluenced by experience in management" (3:6). In other words, the data was gathered on these individuals before the effects of being a manager had an influence on the way they managed.

Another consideration was the requirement to "examine the subjects thoroughly from time to time" to "specify the nature and degree of changes in the subjects over the years" (3:6). This thorough examination not only included interviews and questionnaires, but a "full battery of tests and interviews, supplemented by other methods of evaluation" (3:6). The examinations were conducted over a three-day-period at a place termed the "assessment center" (3:6). These assessments were to take place at the start of the study, eight years later, twenty years from the start, and one or more additional times after that (3:6).

In addition to the assessment, subjects were interviewed on a yearly basis to keep in touch with both the subject and his career. The plan for this interview was to "interview the subject annually and to interview those in his telephone company who were in a position to comment on him and his career at or about the same time." (3:6).

A final consideration of confidentiality "was important not only with respect to possible ethical implications, but

also from the research point of view. All data on individuals was identified only by code numbers, which were assigned at the start of the study." (3:6).

The design of this study is outlined in Table 1. The complete study was designed to last longer than 20 years. The Formative Years in Business was written to present the first eight years in the business life of the college recruits (3:9).

Table 1: Design of AT&T Career Progression Study
(Reprinted from 3:7)

Time Period	Data from Subjects	Data from Subjects' Companies
Start	Assessment	—
Elapsed years		
1-4	Intensive interview Questionnaires of attitudes and expectations	Intensive interview with departmental personnel supervisor
5	Intensive interview Questionnaires of attitudes and expectations	Intensive interview with departmental personnel supervisor Interviews with two former bosses
6	Intensive interview Questionnaires of attitudes and expectations	Intensive interview with present boss
7	Intensive interview Questionnaires of attitudes and expectations	—
8	Reassessment	Collection of present appraisal, level, and salary information

The AT&T study determined the important indicators for predicting progress from the interviews and assessments performed on the subjects of this study. Of the 274 total recruits, "Forty percent failed to last out this [8 year] period; of those who remained, some have already come to a dead end, while others are clearly on their way to the top." (3:9).

With respect to the question of accurately predicting progression in management, a comparison of the recruits' predicted management level and the level actually attained in eight years is displayed in Table 2. Interpreting the outcomes in Table 2, Bray et al stated,

> It can be noted that 64 percent of those who had been seen to have such potential did reach the third level of management in this period of time, as compared with only 32 percent of those not so judged. This means very simply that it is possible to improve substantially on the selections made by ordinary college recruiting process. It also means that personal characteristics displayed on the day of employment are definitely related to later success. (3:70)

To determine the important indicators of career progression, two psychologists studied the interviews with the subjects from the study. The two psychologists rated the work environment each subject had experienced on some 18 variables, which were combined into the following areas: Job Stimulation and Challenge, Degree of Supervisory Responsibilities, Open versus Structured Assignments, Working Alone versus as a Group Member, Morale of the Work Group, Quality of Supervision, and the Degree to which the

Table 2: Comparison of Predicted Versus Actual Success

(Reprinted from 3:69)

	N	Number Reaching Middle Management	Percentage Reaching Middle Management
Predicted to reach middle management	61	39	64
Predicted to fail to reach middle management	62	20	32
Total	123	59	48%

Supervisor was an Achievement Model (3:70). Correlating these aspects of the work situation and progress in management revealed that "there were significant relationships between advancement in all but two of the ratings. The unrelated ratings had to do with whether the subject worked alone or with a group and with the morale of the work group." (3:70).

From the analysis of the work environment, AT&T states "job characteristics and advancement are not independent variables. If a man does well on one job, he improves his chances that his next job will be a more demanding one." (3:70-71). It is from this statement that the correlations between the work situation and progress in management do not, by themselves, "prove that challenging assignments develop a man so that he later receives a promotion." (3:71). Instead, "it seems likely that the nature of the

job has an effect on motivation, which in turn affects job performance, leading management to conclusions about promotability." (3:71).

In addition to studying the work environment, AT&T reviewed the assessment process to determine what made the prediction process so accurate. The assessment staff "organized its view of each recruit around 25 variables, each of which was discussed and rated before a final prediction of the man's progress was made." (3:76). Table 3 displays the 25 variables used in the prediction of progress along with the correlation between the variables and the staff prediction in the first columns and the correlation between the variable ratings and progress in management eight years later in the second column (3:76). Of the 25 variables, the following were identified as not being of great concern to a high potential manager: Need for Security, Ability to Delay Gratification, Need for Approval of Superiors, Need for Approval of Peers, Bell System Value Orientation, and Goal Flexibility (3:77).

The advantage that the AT&T study had was the ability to combine all three types of tests: personal history blanks, physical examinations, and psychological tests. By doing this, the number and types of variables were increased, building a model that more accurately predicted the progression of new recruits to management levels. Although the types of variables studied by AT&T are

Table 3: Correlations Between Assessment Variable Ratings and Overall Assessment Rating and Management Level at Reassessment (Reprinted from (3:77)

Variable	Overall Assessment Rating* (N = 207)	Level at Reassessment** (N = 123)
Human Relations Skills	.66	32
Behavior Flexibility	.63	21
Organizing and Planning	.61	28
Need for Advancement	60	31
Decision Making	59	18
Perception of Threshold Social Cues	59	17
Personal Impact	57	15
Creativity	57	25
Oral Communications Skills	53	33
Resistance to Stress	51	31
Energy	51	28
Primacy of Work	48	18
Inner Work Standards	46	21
Scholastic Aptitude	46	19
Range of Interests	45	23
Realism of Expectations	42	08
Tolerance of Uncertainty	39	30
Self-Objectivity	38	04
Need for Security	− 32	− 20
Ability to Delay Gratification	− 30	− 19
Need for Approval of Superiors	− 18	− 14
Need for Approval of Peers	− 16	− 17
Bell System Value Orientation	15	− 02
Goal Flexibility	− 13	− 18
Social Objectivity	.04	13

*rs .14 or higher significant at .05 level; .18 or higher significant at .01 level.

**rs .18 or higher significant at .05 level, .23 or higher significant at .01 level

unavailable with the historical data available through the Air Force Military Personnel Center, the research performed by AT&T did prove that it is possible to more accurately predict the progress of applicants to management levels by

analyzing the historical data identified as being important in the procession process.

In the thesis written by Cady, officers who were considered as having been successful (officers who had obtained the rank of colonel) and officers who were not considered as having a successful career (lieutenant colonels who had been passed over twice for promotion to colonel) were compared to determine if any variables existed that differentiated the two career paths. This difference was going to be used to establish a profile for civil engineers to follow for developing a career progression plan since "AFR 36-23 provides only general and vague guidelines for Air Force civil engineering officers to follow." (4:3).[1]

Cady's thesis consisted of two populations within the civil engineering career field and were selected based on rank. One population consisted of 133 colonels and generals currently on active duty, and the second population consisted of 30 lieutenant colonels who had been passed-over twice for promotion to colonel and who were currently on active duty (4:17).

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[1] These definitions of successful and non-successful officers are not endorsed in this research since it can be argued the attainment of lieutenant colonel alone shows an officer has had a successful career. Instead, selecting this thesis for review was based on the variables the author found were important when looking at career progression.

Data on these officers were obtained from the "computerized personnel records, maintained at the Air Force Military Personnel Center (AFMPC), Randolph AFB, Texas." (4:18). The use of this data was chosen because it had been "accumulated over a period of years for each officer" and was used by promotion boards as the "main source of information for determining whether an officer is to be promoted or not." (4:18).

Cady examined 28 characteristics to develop a profile of a "successful" civil engineer. The 28 characteristics were broken down into six major categories, these being; 1) basic biographical information, 2) education, 3) professional military education (PME), 4) military experience, 5) assignments, and 6) awards and decorations (4:19). Table 4 displays the six major categories and 28 characteristics examined to develop a profile of a "successful" civil engineer.

The analysis of the data Cady collected involved three steps. The first step, "profiled successful and unsuccessful civil engineers using means, standard deviations, and relative frequencies." (4:29). In the second step, a t-test and chi-squared analysis were used to "determine which variables were significantly different between the successful and unsuccessful groups." (4:29). The final step consisted of performing a discriminant

Table 4: Major Categories and Characteristics Examined to Develop a Profile of a Successful Civil Engineer

(4:20-28)

1. Basic Biographical Information
   - Current Military Rank
   - Date of Rank
   - Age
   - Region of Birth
   - Military Component
   - Commissioning Source
   - Aeronautical Rating
   - Marital Status
   - Number of Dependents
   - Religious Preference

2. Education
   - Level of Education
   - Air Force Institute of Technology (AFIT) Attendance
   - Highest Education Level Degree Type

3. Professional Military Education
   - Squadron Officer School (SOS)
   - Intermediate Service School
   - Senior Service School

4. Military Experience
   - Command Experience
   - Staff Experience
   - Civil Engineering Experience

5. Assignments
   - Air Force Engineering and Service Center (AFESC)
   - Overseas Assignment
   - Total Number of Assignments in the Last Ten Years
   - Total Number of Duty Location Changes (PCS) in the Last Ten Years
   - Number of Different Major Commands (MAJCOM) Served
   - Career Major Command
   - Percentage of Career Spent in Career MAJCOM

6. Awards and Decorations
   - Number of Awards, Decorations, and Oakleaf Clusters
   - Highest Award or Decoration
   - Officer Efficiency Reports (OER)

analysis to "identify those characteristics that best predict career success." (4:20).

There were a number of conclusions Cady reached in his research. First, command experience "was the biggest discriminator and tends to give the impression the command experience is a must for career success. Command experience has importance to career success and especially when an officer reaches the upper rank structure." (4:60). Second, the "significance of the number of duty location changes (PCS) tends to confirm the hypothesis that mobility is an ingredient to success." (4:61). Third,

> PME did not prove to be as important as believed ...Intermediate service school came in as a discriminator not due to completion, but due to the successfuls having a larger number of people taking the school from another service. Also, senior service school entered the discriminant function not due to completion, but because the successfuls had higher percentages of people attending senior service schools in residence. (4:61)

Fourth, the "results of the analysis indicate that having a higher medal is important." Last, the "results indicated that having an AFESC tour was an aid to success." (4:61).

The last thesis reviewed was written by Captains Knight and Williams. In 1970, Knight and Williams studied the career progression of graduates of the School of Systems and Logistics Graduate Logistics Management Program. Knight and Williams compared, at that time, the six logistics disciplines with the then Air Force Manual (AFM) 36-23, Officer Career Management, to "determine whether or not the

graduates were progressing according to the expectations of the Air Force." (9:8-9).

In performing this study, only AFIT graduates were looked at by reviewing Air Force Forms 1718-1, U.S. Air Force Officer Assignment Briefs. Each officer was grouped into their discipline and evaluated against the career progression goals outlined in AFM 36-23. A second comparison was then performed between the outcome of the first comparison and what the Career Development Monitors considered important for career progression of these officers (9:12). Career progression goals were divided into the following five phases: years of commissioned military service, grade, job assignments, training, and education (9:19). Models were then formulated for each of the five areas to determine whether an officer was or was not progressing when compared with AFM 36-23.

Three hypotheses were developed to "test the overall career progression of officers in each Air Force Specialty and of company grade officers with less than eight years commissioned service as compared to officers with eight or more years commissioned service." (9:73). The first hypothesis analyzed the officer's career progression in each of the Air Force Specialties being studied. These specialties being: 30XX--Communications/Electronics; 43XX--Aircraft Maintenance; 65XX--Procurement; 64XX--Supply Management; 66XX--Logistics; and 67XX--Financial (9:41).

Recall that the transportation management option was not offered at the School of Systems and Logistics until 1981 (15). The second and third hypotheses involved "analyzing the careers of company grade officers who had less than eight years commissioned service time and officers who had eight or more years commissioned service time." (9:41). The eighth year being considered the cut-off point between junior and senior officers (9:69).

For the first hypothesis decision, rules were developed with which the career progression of officers could be evaluated. The rules were specified by Knight and Williams after taking into consideration "category ranking and other statements by the [career] monitors as well as the career progression guides" (9:43) This method of establishing the evaluative criteria utilized the authors of this research as the experts. Once the ranking of the five phases was calculated, the t-test was performed to determine whether or not there was a correlation between what Knight and Williams found to be important and what the Career Development Monitors identified as important (9:49).

For the second and third hypothesis the population of company grade officers was divided into two groups. The first group consisted of officers with less than eight years of commissioned service and the second group consisted of officers with at least eight years of commissioned service. Using the decision rules established by Knight and Williams,

the number of officers progressing and not progressing were evaluated and the percentage of officer progressing calculated.

Knight and Williams discussed their findings following the pattern established by the three hypotheses. First, for overall career progression, "although definite conclusions about the overall progression as it related to each area could not be drawn, there did appear to be a relatively close relationship of the progression in each category except training." (9:74). Training in this case was defined as "basic officer qualifying courses and other short courses." (9:41).

Testing the second and third hypotheses revealed that "the officers with less than eight years of commissioned service had higher progression rates than the officers with at least eight years of commissioned service." (9:74). The PME category provided the most variance in these two populations with officers with less than eight years commissioned service having a higher progression percentage, 89.1%, when compared with officers with at least eight years of commissioned service, 55.2% (9:75). After evaluating their analysis, Knight and Williams determined that overall, officers graduating from the Graduate Logistics Management Program showed career progression throughout their careers (9:81).

Although Knight and Williams' thesis did determine whether or not an officer progressed in their career after attending AFIT, the problem that surfaced was the fact that past AFIT graduates were only compared with Officer Briefs and not with non-AFIT graduates. While this did provide another example of using data from Officer Briefs to make comparisons, it did not compare graduates from AFIT to graduates from civilian institutions to determine if having a degree from AFIT makes a difference towards career progression. In addition, these Officer Briefs were compared to AFR 36-23, which provides only general guidelines for determining a career progression plan.

Summary

This chapter reviewed the Air Force career development literature by looking at AFR 36-23 and other Air Force publications, looking at ways of determining career progression, and reviewing three key studies conducted in the area of career progression. The first study reviewed was performed by AT&T and was concerned with being able to predict career potential in the people they were hiring. In both of the theses reviewed, Officer Briefs were utilized to provide the required data. The type of data considered is "secondary" because it is obtained through the study of historical records (8:67).

By combining this type of data collection with primary data collection, through the use of a Delphi Survey procedure to obtain a concensus of senior transportation officers, this research will combine these two forms of data to identify factors that senior transportation officers consider important to the career progression of transportation officers (8:67). This research combines the "traditional" or "magic formula" approach to identifying factors important to the career progression of transportation officers and the "Relative Evaluative Criteria" method of identifying the "value added" by possessing a particular factor, in this research, a graduate degree from AFIT.

III. Methodology

Introduction

This chapter describes the process used to find the factors that senior transportation officers considered as important when looking at the career progression of officers in the transportation career field. Instead of looking at the records of senior transportation officers to determine the best way to progress in a career (the "traditional" approach which tries to find the "magic formula" for ensured career progression) the "Relevant Evaluative Criteria" method was used, which identifies the factors that senior transportation officers consider to add value to the progression of an officer's career.

For this research, a group of senior transportation officers participated in a Delphi procedure. This procedure sought to determine a concensus on the factors that are importanct to transportation officer career progression. The factors, or criteria, developed through this approach are based on the actual experiences and preferences of the senior transportation officers who participated. They are, therefore, "relevant evaluative criteria" in the since that these senior transportation officers are the ones who have significant influence on transportation officer career progression. It is this orientation towards primary, relative evaluative criteria that distinguishes this research from previous efforts, and which will reduce the

probability of this research from falling under the "magic formula" syndrome.

Delphi Assessment

The Delphi procedure was developed by Gordon and Helmer, from the Rand Corporation, in the late 1940s as "a systematic method for eliciting expert opinion on a variety of topics, including technological forecasting" (13:iii). The purpose of performing a Delphi procedure is to have a

> controlled and rational exchange of iterated opinion leading toward optimal covergence of opinion achievable within the framework of the technique. The heuristic objective views Delphi as an educational technique to help participants, the director, and users to explore a problem area more thoroughly, leading to greater insight on the target problems. (13:6)

The development of the Delphi stemmed from the desire to prevent the bias which, from face-to-face discussion, usually leads to a group opinion less accurate than the average of the individual's opinions without discussion. Causes of biasing include: 1) dominant individuals of a group; 2) "noise" attributable to group maintenance problems; and 3) group pressure to conform (5:7).

The dominant individual is one who may overwhelm the majority of the group by pushing his or her views even though the arguments may have little merit. This becomes a factor because it has been shown through experiments that "it is not the validity but the number of comments and

arguments for or against a proposed position which carries the day" (10:19).

"Noise" that appears in a group situation comes in the way of misinformation. It is the hope of group meetings that the misinformation will be canceled by good information (10:19).

Group pressure to conform comes from the group taking on a life of its own. When this happens, reaching an agreement becomes more important than the decision made (10:19).

By using the Delphi procedure, these disadvantages can be drastically reduced. This is due to: 1) anonymity; 2) iteration with controlled feedback; and 3) statistical group responses.

Anonymity is kept by not letting any panel member know who the other panel members are. In addition, questionnaires are used to keep the interaction of group members anonymous (10:20).

Iteration with controlled feedback prevents the panel from wandering from the goals and objectives of the research. This keeps a group concentrating on the original objectives instead of having them be distracted by self--directed goals (10:21).

Statistical group response provides a range over which the opinions of the entire group are reflected. For example, group response can be represented by the median and

interquartile range (IQR). The median is the "middle" point of a set of data and the IQR is the 50 percent of data points surrounding the median (12:33-45). By displaying information in this way, "each opinion within the group is taken into account in the median, and the spread of the opinion is shown by the interquartile range" (10:21).

Determining Progression Variables. The Delphi procedure was the research process used to determine the factors that senior transportation officers considered important for the career progression of transportation officers. This procedure works toward group consensus by using panel members that never meet face-to-face. The Delphi procedure was selected for its reliability in estimating "almanac type" data, historical data readily available (10:52). The decision to use a Delphi procedure led to two questions: 1) Who are the experts?; and 2) What questions to ask?

Panel Selection. Senior transportation officers were the experts for this research and were selected to insure that common, or cultural, bias that these officers may share from being assigned to the same command would not be a factor (10:52). To prevent bias, 24 senior transportation officers were selected from among the senior transportation officers chosen by the Director of Transportation (HQ USAF/LET), to represent the various relevant points of view in establishing transportation

policy for all commands. This group of senior transportation officers consisted of 2 generals, 18 colonels, and 4 lieutenant colonels. Before sending questionnaires to the panel members, they were called to insure their cooperation in filling out the survey and to build interest in this research project. The first questionnaire was sent out once pretesting had been completed. The second round questionnaire followed six weeks after the initial questionnaire.

Questionnaire. The questionnaire went through three stages of development before being sent out to panel members. The first stage consisted of brainstorming conducted by the researcher and identifying measurable factors during a review of past studies. Questions were developed from an Officer Brief to insure the questions being asked of the senior transportation officers could be related to the Officer Briefs of transportation graduates. For this reason, the characteristics identified by Cady were used as the initial list of factors to be used in the Delphi procedure.

The second stage was a preliminary validation by the Chief of the Transportation Management Branch at Wright-Patterson AFB (2750 ABW/DMT), to validate the questions generated from stage one and to generate additional questions, if necessary, which would aid in determining the factors of career progression.

The final stage of questionnaire preparation actually started the first round of the Delphi procedure. This first round questionnaire was completed by one of the panel members and allowed for one additional opportunity to "fine-tune" the questionnaire before being sent out to the rest of the panel members. Data gathered from this third stage was kept and included with the data gathered during the two rounds of the Delphi.

The reasoning behind the two validation steps was to reduce the number of rounds necessary to arrive at a consensus with the panel members. The aim was to have this consensus of senior transportation officers after two rounds of the Delphi procedure.

Each question in the questionnaire was broken down into three parts. The parts of each question were: 1) the estimate, 2) importance, and 3) comments.

The first section consisted of having the senior transportation officers estimate, numerically, how long or how often a particular factor should occur during an officer's career. This section of the questionnaire provided a range of estimates dependent upon on how the senior transportation officers answered the question. An example of the estimate section of a question is displayed in Figure 2.

The second section of the question utilized a Likert scale to determine how important the senior transporters

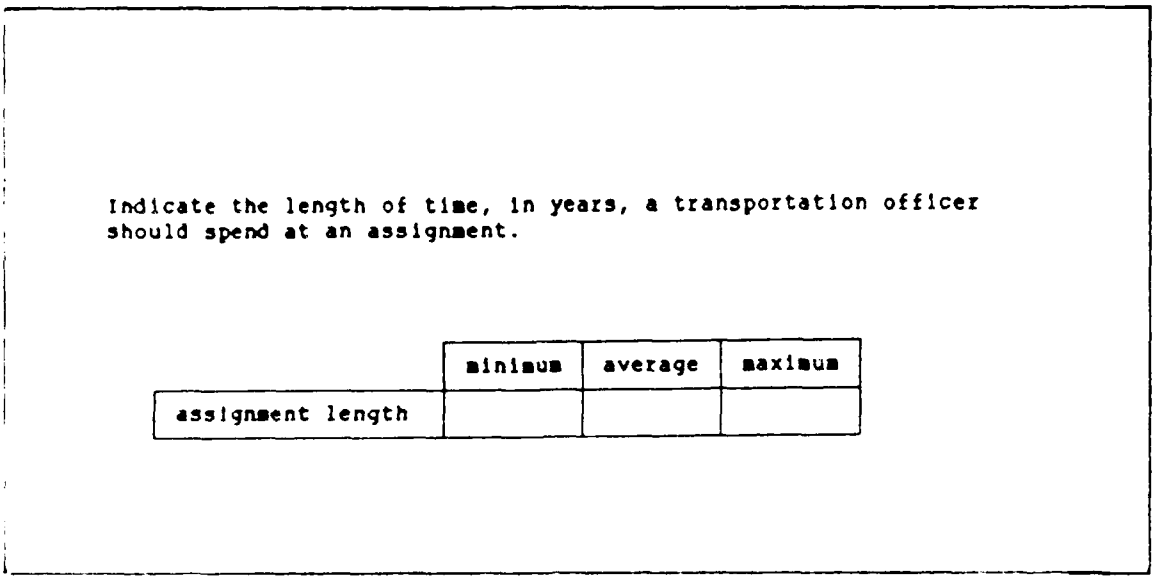


Figure 2: Sample Estimate Section for Factor Question

considered the factor to be in the career progression of transportation officers. The Likert scale used in this study consisted of five points ranging from highly important to highly unimportant with the midpoints being important, neither important nor unimportant, and unimportant. Figure 3 displays an example of the Likert scale used in this research to determine the importance of career progression factors.

The last section of each question allowed the panel members the opportunity to express their comments on how the particular factor related to the career progression of transportation officers. This section was used to gain a better understanding for the selections under sections one and two of the question.

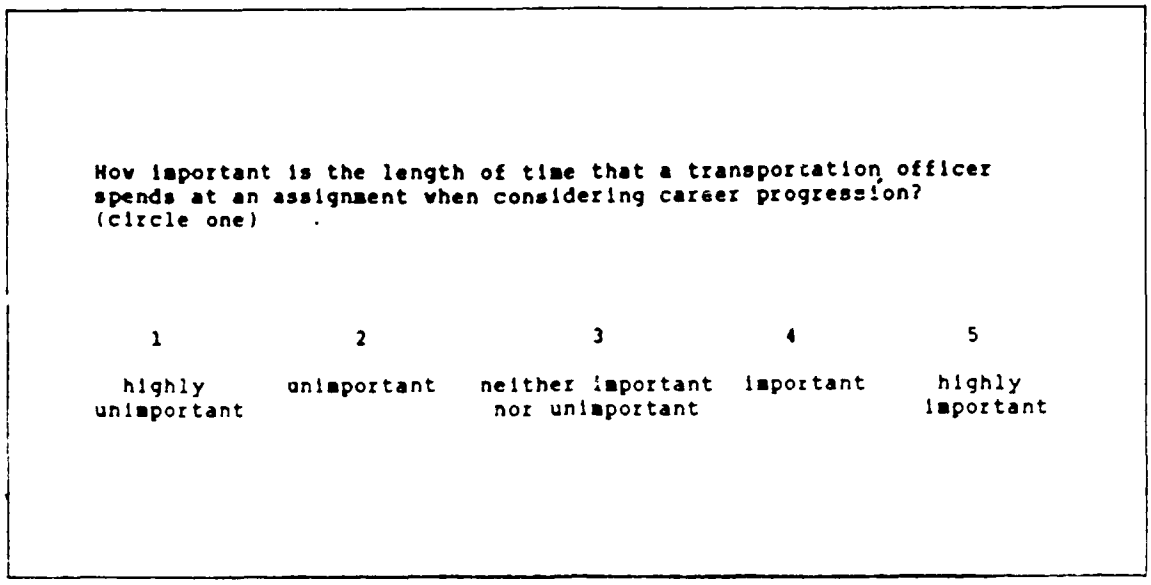


Figure 3: Sample Importance Section for Factor Question

The Delphi questionnaire was designed to produce a list of the relative evaluative criteria that senior transportation officers use when evaluating the career progression of a transportation officer. In addition to this list of factors, the importance and interrelationships between these factors when evaluating the career progression of transportation officers was also measured.

The Statistix II software package from NH Analytical Software was used to calculate the descriptive statistics for both of the questionnaires. For the whisker and box plot produced by Statistix II, the following data is provided:

> ...the "[" and "]" encloses the middle half of the data; the middle (median) of the data is marked with the "+". the parentheses represent approximate 95% confidence intervals about the medians...The "whiskers" indicate "typical" data

values. Extreme values are displayed as "*" for possible outliers, and "O" for probable outliers. If any of the symbols +,[,],(,) are missing, it is because they were overprinted by another symbol... (M:9.18)

An example of the whisker and box plot output is provided in Figure 4.

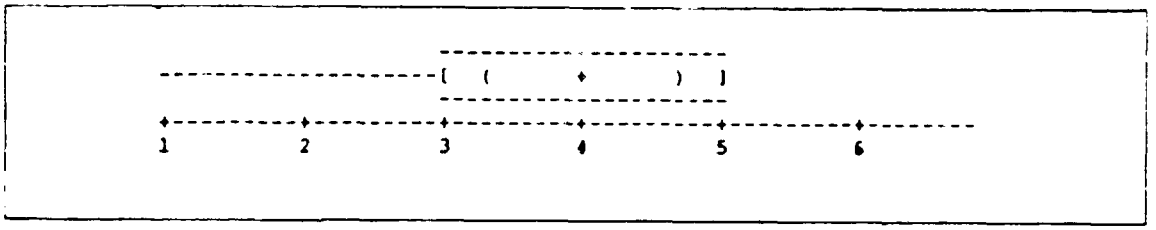


Figure 4: Sample Whisker and Box Plot Output

First Round Questionnaire. The first round questionnaire package was sent to 23 panel members and included a cover letter with a copy of the questionnaire and an addressed return envelope. The instructions requested that the questionnaire be returned within ten working days. After one week, calls were made to each panel member to ensure they had received and understood the questionnaire. By the final cut off date all but two of the panel members had returned the questionnaire for a 91% response rate. One of the panel members had a temporary duty assignment during the first round, but was still included during the second round. Individual responses were tracked through the Delphi procedure by randomly assigning a number between 1 and 24 to each of the panel members. The list which matched

respondent's names to their number was destroyed at the conclusion of this study. A copy of the first round cover letter and questionnaire is located in Appendix A.

Second Round Questionnaire. The second round questionnaire was developed from the analysis of the first round responses. During the analysis phase of the first round questionnaire, the data collected was handled as ordinal data, meaning the median and quartile were used to determine the center point of the data and the interquartile range (IQR) to determine the dispersion of the data points around the median.

For each question, the importance of each factor, in relation to career progression, was first analyzed. Only those factors with a median value of 3.5 or greater, on a scale from 1 to 5, were included in the second round questionnaire. In addition to the requirement for the median value, at least 50 percent of the senior transportation officers had to have responded within $\pm$ 1 point on the Likert scale for the question to be determined important.

The next step, after determining which factors were important, was to look at the variability of the estimates of how long or how often a particular factor should occur during an officer's career. If the variability was greater than $\pm$ 2, then the question was included in the second round questionnaire. An example of this would be the timing for

obtaining a master's degree, if the IQR was greater than 2 years in either direction from the median, then it was included in the second round questionnaire. Otherwise, the factor was kept as a factor for the model, but not included in the second round questionnaire because a consensus of the senior transportation officers had been achieved.

In addition to the factors retained from the first questionnaire, a second section, consisting of two parts, was included in the second round questionnaire. The first part asked questions regarding AFIT. Participants were asked to generate ideas on what can be done to increase the usefulness of the GTM program, both for officers attending AFIT and the Air Force, to increase mission accomplishment. The second part provided a list of the factors from the first round that were considered important to career progression. The participants were asked to assign a percentage weight to each of these factors. In this fashion, the contribution of each factor to the whole can be weighted with respect to every other factor.

As with the first round package, the second round package included a cover letter with a copy of the second round questionnaire and an addressed return envelope. By the final cut off date all but three of the panel members had responded for an 88% response rate. A copy of the second round cover letter and questionnaire is located in Appendix B.

Analysis of the second round questionnaire was performed in two parts. The first part analyzed the factors included from the first round questionnaire. The analysis of these factors followed the same procedures as the analysis of the first round questionnaire. First the importance of each factor, in relation to career progression, was evaluated. The variability of the estimates of how long or how often a particular factor should occur during an officer's career was then analyzed for those factors identified as important. The second part of the analysis analyzed the second section of the questionnaire and consisted of two parts. The first part was descriptive in nature with ideas generated by the senior transportation officers on how the usefulness of the GTM program can be improved for both officers wanting to attend AFIT and the Air Force to increase mission accomplishment. The second part of the analysis consisted of ranking the list of factors identified as the relevant evaluative criteria by the senior transportation officers and determine the importance weight for each of these factors.

Summary

This chapter reviewed the methodology followed for determining the factors which senior transportation officers considered important to the career progression of transportation officers. A two-round Delphi procedure was

used for this evaluation after a literature review on the topic of career progression had been performed. The first round questionnaire was used to initially identify the factors that the senior transportation officers considered important, as well as to add factors that should be considered important. The second round questionnaire was used to confirm the importance or unimportance of key factors, reduce the estimate variances received from the first round questionnaire, and to confirm the relative importance of the factors found to be important during the first round questionnaire.

IV. Findings and Discussion

Introduction

This chapter discusses the findings from this research and is broken down into two sections. The first section discusses the findings from the first round questionnaire, identifying those factors important to the career progression of transportation officers, those factors which are unimportant, and any additional factors identified as being important by senior transportation officers. The second section discusses the findings from the second round questionnaire, attempting to reduce variance from first round responses, receiving input on changes to improve the AFIT GTM program, and to identify the importance of factors in relationship to each other.

Analysis of First Round Responses

For the first round questionnaire, a total of 20 factors were evaluated. These factors were divided into five major areas: 1) job factors, 2) Professional Military Education (PME), 3) education, 4) other military qualities, and 5) demographics. Table 5 displays these major areas along with the factors and variables (items which affect factors) grouped under each of the areas.

The first step in the analysis process was to determine the importance of each factor by finding the median and

Table 5: Major Areas and Factors Examined to Identify Relevant Evaluative Criteria

1. Job Factors
   - Length of Time at an Assignment
   - Frequency of Overseas Assignments
   - How Often Change Duty Locations (PCS)
   - Squadron Commander Assignment
   - Staff Assignment
   - Time in Major Command
   - Total Number of Major Commands Served

2. PME
   - Time of PME Completion
   - Logistics Professional Continuing Education

3. Education
   - Type of Undergraduate Degree
   - Timing of Master's Degree
   - Type of Graduate Degree
   - Source of Master's Degree

4. Other Military Qualities
   - Source of Commission
   - Age Limits for a Rank
   - Operational Ratings
   - Length of Time Rank Held
   - Awards and Decorations

5. Demographics
   - Geographic Region of Officer
   - Marital Status

calculating the Interquartile Range (IQR). The output from this analysis is located in Appendix C.

The second step in the analysis process was to evaluate the factor estimates provided by the panel members on those factors found important during the first step. The output from this analysis is located in Appendix D.

The third step of the analysis process consisted of consolidating the written comments received from panel members. Comments from the panel members for each factor discussed are located in Appendix E.

The next five sections discuss the responses to the first round questionnaire. The first part of the analysis process consisted of identifying the importance of each factor. Only those factors with a median value of 3.5 or greater, on a scale from 1 to 5, were included in the second round questionnaire. In addition to the requirement for the median value, at least 50 percent of the senior transportation officers had to be within $\pm$ 1 point on the Likert scale for the question to be determined important.

Once the unimportant factors were identified, the next step was to analyze the estimates of how long or how often a particular factor should occur during an officer's career. If the variability was greater than $\pm$ 2, then the question was included in the second round questionnaire to attempt to achieve more of a consensus with the senior transportation officers. Otherwise the factor was kept as a factor for the model, but not included in the second round questionnaire, because a consensus of the senior transportation officers had been achieved.

Job Factors. Tables 6 and 7 present the response data for the area of job factors. The first factor under this

TABLE 6
ROUND ONE RESPONSES - AREA 1 - JOB FACTORS

\VAR C		ASSMT LENGTH MIN	AVG	MAX	IMP	OVRSEAS TRS SHORT	LONG	IMP	HOW OFTEN PCS MIN	AVG	MAX	IMP	SQUADRON CC MIN	AVG	MAX	IMP
A	01	2	3	5	4	10	8	4	2	3	5	4	13	14	15	5
S	02	1	3	4	4	1	9	5	5	7.5	9.5	4	8	10	13	5
E	03	2	3	4	4	10	7	4	3	4	5	3	10	13	16	5
S	04															
	05	1	3	4	4	10	6	1	1	3	4	5	7	9	12	5
	06	2	3	5	3	10	20	4	2	3	5	3		12		4
	07	1	3	5	4	10	7	5	1	3	5	4	5	9		5
	08	2	3	4	4	6.5	6.5	4	2	3	4	4	10	13	16	4
	09	2	3.5	5	4	1.5	7	5	2	3.5	5	4	10	12	15	4
	10	1.5	3	4	4	7	10	4	1.5	3	4	4	4	6	8	4
	11	2	3	4	3	10	5	3	2	3	4	4	9	10	12	4
	12	1	2	3	4	15	6	4	2	3	6	4	8	12		5
	13	2	3	4	4	8	8	5	2	3	4	4	8	14		5
	14	2	4	6	3	15	10	2	1	4	6	4	10	12	14	5
	15	2	3	4	4	1	4	5	2	2.5	4	4				1
	16	1	3	4	4	8	8	5	1	3	4	4	10	13	20	5
	17															
	18	2	3	4	4	15	10	3	2	3	4	3	8	10	14	5
	19	2	3	4	4	10	6	4	3	4	5	4	7	11	15	5
	20	1	2	3	4			2	3	3.5	4	4	0	10	28	5
	21	2	3	5	4	10	10	3	2	3	5	3	8	10	12	5
	22	2	2.5	3	4			2	2	2.75	5	4	11	14	18	5
	23	2	3	4	4	1	8	5	2	3	4	4	13	15	18	5
	24	2	3	4	5	20	10	1	3	3	4	4	6	7	14	2
MEDIAN		2	3	4	4	10	8	4	2	3	4.5	4	8	12	15	5
1ST QUAR		1	3	4	4	6.75	6.25	3	2	3	4	4	7	10	13	4
3RD QUAR		2	3	5	4	10	10	5	2	3.5	5	4	10	13	16	5

TABLE 7
ROUND ONE RESPONSES - AREA 1 (CONT) - JOB FACTORS

	STAFF ASSIGNMENT				MAJCOM TIME		NUMBER OF MAJCOMS				
\VAR	MIN	AVG	MAX	IMP	YRS	IMP	CPT	MAJ	LTC	COL	IMP
C											
A 01	6	7	8	4	4	2	2	4	5	6	5
S 02	8	10	13	4	5	2	2	3	4	5	5
E 03	8	12	14	5	5	4	1	2	3	4	4
S 04											
05	9	9	12	5	1	2	3	4	6	6	1
06		6		4	2	1.5	2.5	2.5	3.5	3	
07	6	12		5	7	3	1	3	4	5	4
08	8	15	30	5	6	3	2	3.5	4.5	5	4
09	6	10	15	4	8.5	4	2	2	2.5	3.5	4
10	6	8	10	4	4	4	3	4	5	5	4
11	7	8	10	4			0	1	2	2	4
12	6	8		5	3	3	2	2.5	2	2	1
13	12	14		4	8	3	1	2	3	3	3
14	8	10	14	4	6	2	3	4	5	5	5
15	10			4	6	4	1	2	2.5	3	4
16	8	12	16	4	5	3	2	3	3.5	4	4
17											
18	6	8	10	5	6	1	2	3	4	5	5
19	8	10	12	5	6	2	2	3	4	5	4
20	0	0		5						2	1
21	8	10	12	5	7	4	2	3	3	3	3
22	8	12	18	5	10	2	2.5	3	4	4.5	4
23	10	13	15	4	4	3	2	3	4	5	4
24	5	6	10	5	4	1	3	3	3	3	1
MEDIAN	8	10	12.5	4.5	5.5	3	2	3	4	4.25	4
1ST QUAR	6	8	10	4	4	2	2	2.5	3	3	3
3RD QUAR	8	12	15	5	6.5	3.5	2.5	3	4	5	4

area was length of time at an assignment. This factor was considered important to the career progression of transportation officers, but confusion resulted between this question and the question concerning how often a transportation officer should change duty stations. After reviewing the comments concerning the length of time at an assignment and the change of duty locations, the factor concerning time at an assignment was removed from consideration.

The second factor analyzed was the frequency of overseas short and overseas long tours. The importance of this factor was indicated by the median of 4 (important) on the Likert scale and the interquartile range (IQR) being 3 to 5 (neither important nor unimportant to highly important). With the importance of the factor identified, the variance of the estimate for the factor was then analyzed. For this factor, the variance was greater than the four year range established as a requirement in the methodology. Due to the variance of this factor, it was included in the second round questionnaire to attempt to decrease the variance. Comments concerning overseas assignments identified their importance to a transportation officer's career progression through gaining and understanding of how the mission is accomplished away from the Continental United States (CONUS) and by gaining credibility through job performance at these overseas

locations. Because of the importance identified for overseas tours, it was inferred that a problem in interpreting the estimate section of the question was reason for the large variance. For this reason, the question was reworded for the second round questionnaire.

The third job factor analyzed was how often a transportation officer should change duty locations (PCS). The importance of this factor was identified by the median and IQR all being rated 4 (important) on the Likert scale. The variance of the estimate for this factor was then analyzed and the IQR calculated to be between 3 and 3.5 years with a median of 3 years. This factor was kept for the model and was not included in the second round questionnaire because the variance was within the established limits. Comments on how often a transportation officer should PCS stressed the importance of staying at one duty location long enough to become proficient at the job, not too short of time to make changes and not be around for the outcome and not too long to become bored with the position.

The fourth factor analyzed was when a transportation officer should become a squadron commander. The median for importance of this factor when considering the career progression of transportation officers was 5 (highly important) and the IQR was 4 to 5 (important to highly important), within the established limits. The variance of

the estimate for this factor was also within the four year IQR limit of the median. For this factor the median was the 12 year point for becoming a squadron commander with the range being between 10 and 13.5 years. Because the variances for both parts of the question were within limits, this question was not included in the second round questionnaire, but was kept for the final model. Comments concerning squadron commander assignments identified this position as the "true test" of an officer's capabilities and as a "real plus" in the career progression ladder.

The fifth factor, when should a transportation officer enter a staff assignment was analyzed next. The importance of having a staff assignment was identified with a median of 4 (important) and an IQR of 4 to 5 (important to highly important). The estimate median for this factor was the 10 year point with the IQR of the estimate being between 8 and 12 years. Both the variance of the importance and estimate were within the established limits. For this reason, this factor was included in the model but was not included in the second round questionnaire. Comments for having a staff assignment indicated that these assignments help give an officer a better understanding of the Air Force mission, although it was not identified as being as important as having a squadron commander assignment and that transportation officers should not stay in staff positions for an extended period of time.

The sixth factor analyzed concerned the amount of time spent in a major command. The amount of time spent in a major command was not deemed to be important with a median of 3 (neither important nor unimportant) and an IQR of 2 to 4 (unimportant to important). Since it was not identified as important, this factor was not included in the model or second round questionnaire. Comments on the time spent in one major command did not identify this as a major concern, but multicommand identity was noted as important.

The last factor analyzed under job factors was the total number of major commands served. The importance of the number of commands served was indicated by a median of 4 (important) and an IQR of 3.5 to 4 (between neither important nor unimportant and unimportant to important). The estimates for the number of major commands was broken down into ranks. For the rank of captain the median was 2 major commands with an IQR of 1.5 to 2.25 commands. For the rank of major, the median increased to 3 commands with an IQR of 2.25 to 3 commands. For the rank of lieutenant colonel, the median became 3.75 commands with an IQR of 3 to 4 commands. For the rank of colonel, the median became 4 commands with an IQR of 3 to 5 commands. With the importance established and the variance of the estimate within the limits, this factor was included in the model and was not included in the second round questionnaire.

Comments for the total number of major commands served in identified this factor as important for demonstrating versatility and for obtaining a breadth of experience in the transportation career field.

Under the area of job factors, five of the seven factors were identified as being important when considering the career progression of transportation officers. These were: 1) overseas tours; 2) changing duty locations; 3) squadron commander assignment; 4) staff assignment; and 5) number of major commands served. The variance of the estimate on how often a transportation officer should go overseas prompted its inclusion in the second round questionnaire to attempt to reduce the estimate variance.

Professional Military Education (PME). Table 8 presents the response data for the area of PME. The first factor analyzed under PME was the time of PME completion. The importance of PME courses when considering the career progression of transportation officers was indicated by a median of 4 (important) and an IQR of 4 to 5 (important to highly important). Comments concerning the attendance of PME courses found these courses to be important in the career progression of transportation officers but less important than they use to be due to the emphasis now being placed on job performance. This factor had two additional questions which asked about variables relating to the completion of PME.

TABLE 8
ROUND ONE RESPONSES - AREA 2 - PME

		TIME OF COMPLETION												IMPORTANCE OF LOG PCE COURSES				
		SOS			ACSC/ISS			AWC/SSS				HOW	SIS					
VAR		MIN	AVG	MAX	MIN	AVG	MAX	MIN	AVG	MAX	IMP	COMPL	PME	092	199	221	224	299
C																		
A	01	3	4	5	12	13	14	18	19	20	4	4	1	3	0	0	0	3
S	02	5	6	8	10	11	12	14	16	18	4	2	1	5	0	0	0	0
E	03	4	5	7	10	12	14	14	16	18	4	3	2	4	4	0	4	0
S	04																	
	05	2	3	5	7	8	11	14	17	19	4	5	1	5	4	4	4	4
	06		6			13			19		4	1	5					
	07	3	5	9	8	11	15	16	19	24	4	5	4	5	4	3	4	5
	08	3	4	6	11	12	14	18	20	23	5	4	1	2	0	0	0	0
	09	4	6.5	10	11	12	14	14	16	18	4	4	3	3	4	3.5	4	4
	10	3	4	5	9	11	12	16	17	19	4	4	3	4	3	4	3	4
	11	2.5	3	4	7	8	10	15	17	18	4	3	4	0	0	0	0	0
	12		5			12			17		5	4	4	4	0	0	0	0
	13	3	5	7	12	13	14	16	18	20	4	3	3	3	3	3	3	3
	14	4	6	8	8	10	12	10	12	16	4	3	3	1	1	1	2	1
	15	3	3.5	4	10	11	12	15	16	17	5	5	3	3	3	3	3	4
	16	5	7	10	12	14	16	16	18	20	4	5	3	4	4	0	4	4
	17																	
	18	5	7	8	12	13	14	15	16	17	5	3	3	3	3	3	3	3
	19	3	5	7	7	10	12	11	13	15	4	2	2	5	3	3	3	3
	20										4	4	2	3	3	3	3	3
	21	6	7	8	10	12	14	14	16	18	4	4	4	4	4	4	4	4
	22	5	6	8	12	13	15	16	20	22	4	2	2	3	0	0	0	0
	23	3	5	7	7	9	13	16	18	20	5	3	3	5	4	4	4	4
	24	4	5	7	7	8	9	13	15	17	2	2	4	4	4	4	4	5
MEDIAN		3	5	7	10	12	14	15	17	18	4	3.5	3	4	4	3	4	4
1ST QUAR		3	4	5.5	7.5	10	12	14	16	17.5	4	3	2	3	3	3	3	3
3RD QUAR		4.5	6	8	12.5	13	14	16	18	20	4	4	4	4.5	4	4	4	4

The first variable, how PME is completed (in-residence versus correspondence) was identified as being important for career progression. The median for how PME is completed was 3.5 (between neither important nor unimportant and important) with an IQR of 3 to 4 (neither unimportant nor unimportant to important). The panel members identified in-residence as better than completing the course by correspondence.

The second variable, the completion of sister-service PME courses (e.g. Army Command and General Staff College, Naval War College) was not identified as being important for career progression. The median for the completion of sister-service PME was 3 (neither important nor unimportant) with an IQR of 2 to 4 (unimportant to important). Comments on the completion of sister-service PME indicated this factor was not as important an Air Force PME courses unless preparing for a joint command assignment.

The estimates, in years, for the completion of PME was then analyzed by course. The median value for the completion of Squadron Officer School (SOS) was the 5 year point. The IQR for SOS was 4.5 to 6 years.

The median value for completion Air Command and Staff College (ACSC) or other Intermediate Service School (ISS) was the 12 year point. The IQR for ACSC or ISS was 10.5 to 13 years.

The last schools, Air War College (AWC) or other Senior Service School (SSS), had a median of 17 years for completion. The IQR for AWC and SSS was 16 to 18.5 years.

The variances of the importance and estimates for each of the schools were within the limits established in the methodology. For this reason, this factor was included in the model, but not the second round questionnaire.

The other factor analyzed in this area was Logistics Professional Continuing Education (PCE). For this factor a list of PCE courses was provided with the importance of each course being evaluated. An additional point was added to the Likert scale for determining the unfamiliarity of PCE courses. This point was "0" and was used to identify courses which were unfamiliar to the panel member. Five courses were evaluated by the panel members.

The Senior Transportation Executive Development Program (LOG 092) was the first course listed. The importance of this course was indicated with a median of 4 (important) and a range of 3 to 4.5 (neither important nor unimportant to between important and highly important).

The Introduction to Logistics Course (LOG 199) was the next course listed. This course was termed to be important with a median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important).

The third course listed was the Logistics Managers and Computer Simulation (LOG 221). This course was identified

as not being important with a median of 3 (neither important nor unimportant) and an IQR of 3 to 4 (neither important nor unimportant to important).

The fourth course listed Logistics Management (LOG 224). This course was identified as being important with a median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important).

The final course listed was Combat Logistics (LOG 299). This course was identified as being important with a median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important).

Even though four of the five courses were identified as important when considering the career progression of transportation officers, each of the senior transportation officers was unfamiliar with at least one of the PCE courses. Comments from panel members concerning the attendance of PCE courses identified these courses as good for broadening an officer's education and logistic experience, but has little impact on the career progression of transportation officers.

Under the area of PME, the time of PME completion and four of the five PCE courses were identified as being important to the career progression of transportation officers. All of the PCE courses listed in the first round questionnaire were included in the second round

questionnaire due to the unfamiliarity with the courses expressed by the panel members.

Education. Table 9 presents the response data for the area of education. The first factor analyzed under the area of education was the importance of the type of undergraduate degree. The type of undergraduate degree was found to be unimportant with a median of 3 (neither important nor unimportant) and an IQR of 3 to 4 (neither important nor unimportant to important). Identified as unimportant, this factor was not included in the model or second round questionnaire. Comments from panel members identified the type of undergraduate degrees as not as important as the right attitude when performing as a transportation officer.

The second factor analyzed was the timing of a master's degree. The timing of a master's degree was identified as being important with a median of 4 (important) and an IQR of 4 to 5 (important to highly important). With the importance of timing identified, the variance of the estimate for the factor was analyzed. The median commissioned time before obtaining a master's degree was identified as 8 years with an IQR of 6 to 8 years. Since this factor met both of the limits it was kept for inclusion in the model and was not included in the second round questionnaire. Comments on the pursuit of a master's degree identified this factor as important when considering

TABLE 9
ROUND ONE RESPONSES - AREA 3 - EDUCATION

\VAR / C		UNDERGRAD DEGREE RANKING							MASTER'S DEGREE				GRADUATE DEGREE RANKING							DEGREE SOURCE			
																				AFIT			
		BUS	ENG	LBA	LOG	SCI	MGT	IMP	MIN	AVG	MAX	IMP	BUS	ENG	LBA	LOG	SCI	MGT	IMP	IN-RES	CIV	NONAFIT	IMP
A	01	1	5	4	3	6	2	2	6	8	10	4	1	5	4	3	6	2	2	1	2	3	4
S	02	3	6	4	1	5	2	2	6	8	10	5	3	6	4	1	5	2	5	1	2	3	2
E	03	3	4	6	1	5	2	3	10	12	14	4	3	4	6	1	5	2	3	3	2	1	3
S	04																						
	05	2	6	4	1	5	3	3	5	10	20	4	3	6	4	1	5	2	3	2	1	3	3
	06							1		10		5							5				1
	07	1	3	5	4	6	2	4	2	6		4	1	4	5	3	6	2	4	3	2	1	3
	08	2	4	6	1	5	3	3	3	6	10	5	3	4	6	1	5	2	1	1	3	2	2
	09	2	5	4	1	6	3	4	10	12	14	3	2	5	4	1	6	3	3	3	2	1	4
	10	2	5	6	1	4	3	4	5	7	9	5	2	5	6	1	4	3	4	2	1	3	4
	11	1	4	6	3	5	2	3				2	1	4	6	3	5	2	1				1
	12	1	6	3	2	5	4	3	2	4	10	4	1	4	6	2	5	3	4	2	1	3	3
	13	2	4	6	1	5	3	3	6	8	14	4	2	4	6	1	5	3	4	1	2	3	4
	14	3	4	6	1	5	2	4	8	10	12	4	3	4	6	2	5	1	4	2	1	3	4
	15	2	3	5	4	6	1	3	6	7	8	4	2	4	5	3	6	1	4	2	1	3	4
	16	4	3	6	1	5	2	3	5	7	10	4	4	3	6	1	5	2	3	1	2	3	3
	17																						
	18	5	1	6	3	2	4	1	6	8	10	3	5	1	6	3	2	4	3	1	2	3	3
	19	3	5	6	1	4	2	4	6	8	11	4	3	5	6	1	4	2	4	1	2	3	3
	20	3	4	6	1	5	2	2	0	5		4	3	4	6	1	5	2	4				1
	21	3	5	4	1	6	2	4	6	8	10	4	3	5	4	1	6	2	4	1	2	3	3
	22	2	4	6	1	5	3	3	2	6	10	5	2	4	6	1	5	3	4	2	1	3	4
	23	2	4	6	1	5	3	3	4	8	12	4	2	4	6	1	5	3	4	1	2	3	4
	24	2	6	4	1	5	3	4	4	6	9	5	2	5	6	1	4	3	5	1	2	3	2
MEDIAN		2	4	6	1	5	2	3	5.5	8	10	4	2	4	6	1	5	2	4	1	2	3	3
1ST QUAR								3	3.5	6	10	4							3				2
3RD QUAR								4	6	8	12	5							4				4

the career progression of transportation officers but not to the same extent under the new Officer Evaluation System (OES).

The third factor analyzed was the type of graduate degree obtained. This factor was identified as being important with a median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important). With the importance of the type of degree identified, the ranking of degrees was analyzed next. A Logistics Management degree was ranked at the top of the list with Business Administration and Management degrees tying for second. An Engineering degree was ranked fourth, a Sciences degree as fifth, and a Liberal Arts degree was ranked as sixth. With this factor being identified as important and a ranking of the types of graduate degrees, this factor was included in the model. Further clarification of this factor during the second round questionnaire was not necessary. Comments concerning the type of graduate degree identified the type of degree as being important with degrees relating to the transportation field being the most desirable.

The last factor analyzed was the source from which a master's degree was obtained. This factor was identified as being unimportant with a median of 3 (neither important nor unimportant) and an IQR of 2 to 4 (unimportant to important). Even though it was termed unimportant, this factor was included in the second round questionnaire to

determine the reasoning for its unimportance. This discussion was based on the reason for this research, which was to determine the value added to a transportation officer's career by attending the AFIT GTM program. If in fact the source of a master's degree is unimportant, then the necessity of having the GTM program at AFIT should be researched. Comments on this factor indicated that the source of a master's degree was not as important as the type of degree or how the officers perform once they have obtained the additional education.

Under the area of education, two of the four factors were identified as important and were included in the career progression model. Another factor, the source from which a master's degree was obtained, was determined to be unimportant by senior transportation officers. This factor was included in the second questionnaire to determine the reasoning for its unimportance.

Other Military Qualities. Tables 10 and 11 present the response data for the factors under other military qualities. The first factor analyzed under other military qualities was the source of an officer's commission. The commissioning source was identified as being unimportant with a median of 3 (neither important nor unimportant) and an IQR of 3 to 4 (neither important nor unimportant to important).

TABLE 10
ROUND ONE RESPONSES - AREA 4 - OTHER MILITARY QUALITIES

	COMMISSION SOURCE							AGE LIMITS										
								CAPTAIN			MAJOR			LT COL			COLONEL			
\VAR C	ACA	ROT	OTS	OTR	IMP	DG	PR SU	MIN	AVG	MAX	MIN	AVG	MAX	MIN	AVG	MAX	MIN	AVG	MAX	IMP
A 01	1	2	3	4	4	3	4	25	30	35	30	35	40	35	40	45	40	45	50	4
S 02	3	2	1	4	2	2	2													2
E 03	2	1	4	3	3	3	2	35	37	39	38	40	42	42	43	44	46	48	50	3
S 04																				
05	2	1	4	3	3	3	2	24	25	29	32	37	43	36	48	55	42	48	60	3
06					5	1	3													4
07	2	1	4	3	3	3	3	24	26	30	30	32	36	35	37	45	39	41	50	3
08	1	3	4	2	4	3	3													1
09	4	1	2	3	3	2	4	32	34	36	34	36	38	38	40	42	43	44	46	3
10	3	1	2	4	4	2	2	25	26	28	32	33	35	37	38	40	42	43	45	3
11	4	1	3	2	2	2	2													2
12	2	1	1	2	3	3	3													3
13	2.5	2.5	2.5	2.5	3	3	3													1
14	2	1	3	4	4	1	3													1
15	1	2	3	4	5	3	3													2
16	1	2	4	3	3	3	3													1
17																				
18	1	3	4	2	3	3	3													1
19	3	2	1	4	3	2	3	25	27	30	30	32	34	34	37	40	40	42	45	3
20	1	3.5	3.5	2	4	4	2													1
21	1	4	3	2	4	4	2	35	37	39	38	40	42	42	43	44	46	48	50	3
22	1	3	4	2	1	1	2													2
23	2	1	3	4	4	3	3	41	42	43	42	43	44	43	44	45	48	49	50	3
24	4	1	2	3	4	1	1	23	25	30	30	35	38	33	37	40	38	40	47	2
MEDIAN	2	2	3	3	3	3	3	25	28.5	32.5	32	35.5	39	36.5	40	44.5	42	44	50	2.5
1ST QUAR					3	2	2	24	26	30	30	33	36	35	37	40	40	42	46	1
3RD QUAR					4	3	3	35	37	39	38	40	42	42	43	45	46	48	50	3

TABLE 11

ROUND ONE RESPONSES - AREA 4 (CONT.) - OTHER MILITARY QUALITIES

	OPERATIONAL RATINGS						HOLDING RANK					AWARDS AND DECORATIONS								
												CAPT		MAJOR		LT COL		COLONEL		
\VAR	PLT	NAV	MLO	OTR	NON	IMP	CPT	MAJ	LTC	COL	IMP	TOT	HGT	TOT	HGT	TOT	HGT	TOT	HGT	IMP
C																				
A 01	1	3	5	4	2	3					5	2	AFCM	2	MSM	3	MSM	4	MSM	4
S 02	5	2	4	3	1	2	8	5	5	6	2	3	AFCM	5	MSM	6	MSM	9	LOM	4
E 03	2	1	5	3	4	3	8	5	5	5	3	4	AFCM	6	MSM	8	MSM	12	LOM	3
S 04																				
05	4	5	3	2	1	4	8	8	12		4									4
06											4									1
07	2	4	3	5	1	2	6	5	6		4	1	AFCM	3	JSCM	5	MSM	7	LOM	2
08	2	3	5	4	1	2					4	2	AFCM	3	MSM	4	MSM	6	LOM	4
09	4	2	3	5	1	4	12	4	6		4	2.5	MSM	3.5	MSM	3.5	MSM	4.5	LOM	4
10	2	3	4	5	1	4	7	7	10	11	3	2	MSM	3	MSM	5	MSM	6	LOM	3
11						2					2									2
12	2	5	4	3	1	4														
13	1	3	5	2	4	4						2	AFCM	3	MSM	5	MSM	6	LOM	4
14	1	2	4	4	4	4	6	4	4		4									3
15	1	4	3	5	2	5	7	5	6	8	4		AFCM		MSM					3
16	2	4	3	5	1	4	8	4	5		4	4	AFCM	5	MSM	7.5	MSM	12	LOM	4
17																				
18						3					5									3
19	4	5	3	2	1	3	8	6	7	9	4	3	MSM	4	MSM	5	MSM	7	LOM	2
20						1					3									1
21	2	2	2	4.5	4.5	3					4									1
22	2.5	2.5	4.5	4.5	1	3	8	4	4		4	3	AFCM	4.5	MSM	4.5	MSM	5.5	LOM	1
23	5	4	3	2	1	3	10	10	6	10	3	5	AFCM	6	AFCM	7	JSCM	8	MSM	4
24	2	3	4	5	1	2	10	5	5	6	4	3	MSM	5	MSM	10	DMSA	12	LOFM	5
MEDIAN	2	3	4	4	1	3	8	5	6	8	4	3		4		5		7		3
1ST QUAR						2	7	4	5	6	3	2		3		4.5		6		2
3RD QUAR						4	8	6	6	9.5	4	3		5		7		9		4

Two additional questions asked about variables relating to the source of an officer's commission. The first variable, graduating as a distinguished graduate, was deemed as unimportant for career progression. The median for this factor was 3 (neither important nor unimportant) with an IQR of 2 to 3 (unimportant to neither important nor unimportant). Comments on being commissioned as a distinguished graduate and career progression were mixed. Many panel members viewed this as a start in the right direction but seldom an important factor in assignments or promotion.

The second variable, being prior service, was also deemed unimportant for career progression. The median for this variable was 3 (neither important nor unimportant) with an IQR of 2 to 3 (unimportant and neither important nor unimportant). Comments on an officer's prior enlisted service indicated an initial advantage in career progression with an evening out process between prior and non-prior enlisted officers occurring at the mid-captain level.

The second factor analyzed was possible age limits for a particular rank. This factor was identified as being unimportant with a median of 2 (unimportant) and an IQR of 1 to 3 (highly unimportant to neither important nor unimportant). With this factor identified as unimportant, it was not included in the second round questionnaire or the final model. Comments concerning the age limits of officers

indicated this factor as a possible problem for prior service officers, but the reasoning why an officer is ahead or behind other peers needs to be judged.

The third factor analyzed was operational ratings. Operational ratings were identified as being unimportant when considering the career progression of transportation officers with a median of 3 (neither important nor unimportant) and an IQR of 2 to 4 (unimportant to important). This factor was not included in either the second round questionnaire or the final model. Comments from panel members concerning operational ratings identified operational ratings as not having an influence on career progression other than demonstrating a breadth of experience.

The fourth factor analyzed was the length of time a rank is held. This factor was identified as being important with a median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important). With the importance of this factor identified, the estimates for the length of time a rank can be held was analyzed by ranks. For the rank of captain, the median was calculated to be 8 years with an IQR of 7 to 8 years. For the rank of major, the median was calculated to be 5 years with an IQR of 4 to 6 years. A median of 6 years was calculated for the rank of lieutenant colonel, with an IQR of 5 to 6 years. Finally, the median of 8 years was calculated for the rank of colonel

with an IQR of 6 to 9.5 years. Since the importance and estimates for the factor were all within specified limits, this factor was included in the final model and was not included in the second round questionnaire. Comments on the length of time an officer holds rank was identified by panel members as a function of and the stigma attached to being passed over.

The fifth factor analyzed was awards and decorations. Awards and decorations were identified as unimportant with a median of 3 (neither important nor unimportant) and an IQR of 2 to 4 (unimportant to important). Because awards and decorations were not identified as being important, this factor was not included in either the second round questionnaire or the final model. Comments by panel members identified awards and decorations as important for personal recognition but not as a factor in career progression.

Under the area of other military qualities, only the length of time rank is held was identified as important to the career progression of transportation officers. This factor was kept for the final model and not included in the second round questionnaire.

Demographics. Table 12 provides the response data for the area of demographics. The first factor analyzed under demographics was the region from which a transportation officer comes from. This factor was identified as being unimportant with a median of 2 (unimportant) and an IQR of 1

TABLE 12
ROUND ONE RESPONSES - AREA 5 - DEMOGRAPHICS

\VAR C A S E S		REGION OF U.S. FROM (RANKING)											MARITAL STATUS
		OUTSIDE CONUS	PACIFIC	MTN	W.N. CENT	W.S. CENT	E.N. CENT	E.S. CENT	SOUTH ATL	MID ATL	NEW ENG	IMP	IMP
	01	7	1	5	6	8	4	10	9	3	2	1	4
	02											1	2
	03	7	6	5	4	8	3	10	9	1	2	3	3
	04												
	05											1	3
	06												
	07	7	5	9	8	2	4	3	1	6	10	1	3
	08											1	3
	09	10	4	6	5	7	2	9	8	3	1	2	2
	10											3	3
	11											2	2
	12											1	1
	13											1	3
	14											5	3
	15											3	3
	16	10	1	2	6	9	5	8	4	3	7	2	4
	17												
	18											1	5
	19	10	6	4	5	2	7	1	3	8	9	2	3
	20											1	1
	21											5	1
	22											1	2
	23	10	3	9	8	4	1	2	5	6	7	2	2
	24	10	9	7	1	3	4	2	6	5	8	5	4
MEDIAN		10	4.5	5.5	5.5	5.5	4	5.5	5.5	4	7	2	3
1ST QUAR												1	2
3RD QUAR												3	3

to 3 (highly unimportant to neither important nor unimportant). Not identified as important, this factor was not included in either the second round questionnaire or the final model. Comments from panel members indicated the midwest may be better due to the work ethic, but the effort and initiative of an officer is the key no matter where they might come from.

The other factor analyzed was the marital status of the transportation officer. This factor was also termed unimportant with a median of 3 (neither important nor unimportant) and an IQR of 2 to 3 (unimportant to neither important nor unimportant). Comments on the marital status of transportation officers indicated that the marital status of an officer could possibly become a factor for field grade officers in staff and squadron commander assignments.

First Round Summary

Table 13 summarizes the importance of factors asked about in the first round questionnaire. To test the importance of each factor, a five point Likert scale which ranged from highly important to highly unimportant was used. Factors were identified as important if the lower end of the IQR was 2.5 or higher.

In addition to the factors provided in the survey, job performance was identified by a number of the panel members as a factor which needs to be included as a

Table 13: Summary of the Factors Queried in the First Round Questionnaire

Factor	Important	Unimportant
1. Job Factors		
Length of Time at an Assignment	X	
Frequency of Overseas Assignments	X	
How Often Change Duty Locations (PCS)	X	
Squadron Commander Assignment	X	
Staff Assignment	X	
Time in Major Command		X
Total Number of Major Commands Served	X	
2. PME		
Time of PME Completion	X	
Logistics Professional Continuing Education	X	
3. Education		
Type of Undergraduate Degree		X
Timing of Master's Degree	X	
Type of Graduate Degree	X	
Source of Master's Degree		X
4. Other Military Qualities		
Source of Commission		X
Age Limits for a Rank		X
Operational Ratings		X
Length of Time Rank Held	X	
Awards and Decorations		X
5. Demographics		
Geographic Region of Officer		X
Marital Status		X

factor for determining the career progression of transportation officers. This factor was intentionally left out of the first round questionnaire due to the inflated ratings that appear in Officer Briefs from the OER system.

With the factors needing further clarification identified and the new factor (job performance) to be introduced, the second questionnaire was written. In addition to the factors, a weighting of the factors identified as important during the first round questionnaire was included to evaluate to what degree a factor is important.

Analysis of Second Round Responses

The second iteration of the Delphi procedure is used to reduce the variance of panel member responses thus obtaining a clear consensus on the subject in question and to gain additional feedback on information provided by panel members during the previous iteration. With these goals in mind, the second round questionnaire was designed after the first round analysis had been completed. This questionnaire was split into two parts. The first part provided feedback on the questions the panel members considered important from the first round questionnaire and sought to reduce the variance of the estimates for these factors. The second part solicited additional information about the areas that panel members considered important in transportation officer career progression and sought to relate these to job performance and its measurement.

The first part of the questionnaire consisted of three sections. The first section focused on short and long-term

overseas assignments; the second section focused on the source of a master's degree; and the third section focused on professional continuing education (PCE) courses.

The second part of the questionnaire was also divided into three sections. The first section solicited views on how job performance can be measured from historical data; the second section solicited views on how the AFIT Graduate Transportation Management (GTM) program can be changed to better meet the needs of the Air Force; and the third section consisted of a list of factors that were identified as being important from the first round questionnaire to be weighted by the panel members as to their relative importance when considering career progression.

The analysis for this round was broken down into two steps. For the first step the Statistix II software program was used to provide descriptive statistics. The output from this analysis is located in Appendix F.

For the second step, comments received from the panel members were consolidated. Comments from the panel members for the second round questionnaire are located in Appendix G.

Part I. Table 14 presents the response data for Part I of the second round questionnaire. The first section under Part I covered overseas tours. The importance of this factor was identified from the first round questionnaire.

TABLE 14
ROUND TWO RESPONSES - PART I

	DEGREE SOURCE						IMPORTANCE OF LOG PCE COURSES									
	OURSEAS TRS		AFIT				LOG 092		LOG 199		LOG 221		LOG 224		LOG 299	
VAR C	SHORT	LONG	IN-RES	CIV	NONAFIT	IMP	CURNT	SHD-BE	CURNT	SHD-BE	CURNT	SHD-BE	CURNT	SHD-BE	CURNT	SHD-BE
A 01	1	2	1	2	3	4	4	4	3	3	2	2	3	3	3	3
S 02	1	3	1	3	2	2	5	4	4	4	2	2	2	4	2	4
E 03	1	2	3	1	2	3	4	4	2	3	3	3	3	4	3	4
S 04																
05	2	2	2	1	3	4	4	4	3	4	2	4	2	4	2	5
06																
07	1.5	2	2	1	3	3	4	5	3	4	3	4	3	4	3	4
08	1	2	1	3	2	2			2	4	2	3	2	4	2	5
09	1	2	2	1	3	3	3.5	4	4	4	4	5	4	4	5	4
10	2	3	2	1	3	2	3	3	4	4	3	3	4	3	5	4
11	2	2	2	1	3	3	3	3	5	5	4	4	4	4	4	4
12	2	3	2	1	3	3	3	3.5	2	4	2	4	2	4	2	4
13	2	2	1	2	3	3	3	3	3	3	3	3	3	4	3	5
14	2	2	2	1	3	5	4	4	2	2	3	4	3	3	3	3
15	2	2	1	2	3	4	3	3	3	3	3	3	3	3	4	4
16	1	2	1	2	3	4	4	4	3	3	3	3	4	3	4	4
17	1	2	2	1	3	4	2	2	4	3	2	3	3	3	4	3
18	1	2	1	2	3	3	3	3	4	4	3	3	3	3	4	4
19	2	2	1	2	3	3	5	5	3	3	3	3	4	4	4	4
20	2	2	3	1.5	1.5	1	3	4	3	3	3	3	3	3	3	3
21	2	2	1	2	3	3	2	2	3	4	3	3	4	4	3	5
22	1	2	2	1	3	4	3	4	2	3	2	3	3	4	2	4
23	1	2	1	2	3	4	3	4	3	4	3	3	3	4	3	4
24																
MEDIAN	1.5	2	2	1.5	3	3	3	4	3	4	3	3	3	4	3	4
1ST QUAR	1	2				3	3	3	3	3	2	3	3	3	3	4
3RD QUAR	2	2				4	4	4	4	4	3	4	4	4	4	4

The purpose of this question was to decrease the estimate variation from the first round questionnaire.

Overseas short tours were first analyzed. The median for this factor was 1.5 tours with an Interquartile Range (IQR) of 1 to 2 tours. For overseas long tours, the median was calculated as 2 tours with an IQR of 2 tours. Comments from panel members concerning overseas tours paralleled the answers from the first round questionnaire. With the reduction in variance for this factor, the restatement of the question was identified as being the key to the change in responses from the first round question.

The second section under Part I concerned the source of a master's degree. This factor was included in the second round questionnaire to determine the reason for its unimportance in round one. This decision was based on the reason for this research, which was to determine the "value added" to a transportation officer's career by attending the AFIT GTM program. The median for this factor was again 3 (neither important nor unimportant) but the IQR changed during this round from the 2 to 4 (unimportant to important) calculated during the first round to 3 to 4 (neither important nor unimportant to important). The ranking of the source of degree also changed from: 1) AFIT in-residence; 2) AFIT civilian institution; and 3) Non-AFIT, recorded during the first round questionnaire, to: 1) AFIT civilian institution; 2) AFIT in-residence; and 3) Non-AFIT after the

second round questionnaire. Comments for this round paralleled those from the first round with the predominant view being that the source of a master's degree was not as important as the type of degree or how the officers perform once they have obtained the additional education.

The third section focused on the importance of PCE courses when considering the career progression of transportation officers. Due to the number of panel members who were unfamiliar with the PCE courses listed in the first round questionnaire, course descriptions were taken from the PCE catalog to aid the panel members in assessing the importance of these courses (2). The following courses were included in this section: Senior Transportation Executive Development Program (LOG 092), Introduction to Logistics (LOG 199), Logistics Managers and Computer Simulation (LOG 221), Logistics Management (LOG 224), and Combat Logistics (LOG 299). For each of these courses, both how important the course <u>is</u> and how important the course <u>should be</u> when considering the career progression of transportation officers was assessed.

The LOG 092 course <u>is</u> considered unimportant with a median of 3 (neither important nor unimportant) an IQR of 3 to 4 (neither important nor unimportant to important). The panel members felt this program <u>should be</u> considered important with a median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important).

Comments from the panel members indicate the LOG 092 course is good but has not gained the reputation as the course to attend for career progression.

The LOG 199 course is considered unimportant with a median of 3 (neither important nor unimportant) and an IQR of 3 to 4 (neither important nor unimportant to important). The panel members felt this program should be considered important with a median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important). Comments on the LOG 199 course indicate this course as one that should be taken by younger transportation officers to broaden their view of transportation with a view of the logistics system.

The LOG 221 course is considered unimportant with a median of 3 (neither important nor unimportant) and an IQR of 2 to 3 (unimportant to neither important nor unimportant). The panel members felt this course should be unimportant with a median of 3 (neither important nor unimportant) and an IQR of 3 to 4 (neither important nor unimportant to important). Comments on the LOG 221 course indicated that unless the job requirements specify a need for this type of course, it is not important for the career progression of transportation officers.

The LOG 224 course is considered unimportant with a median of 3 (neither important nor unimportant) and IQR of 3 to 4 (neither important nor unimportant to important).

The panel members felt this course should be important with a median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important). Comments by panel members concerning the LOG 224 course indicated this course should be a good course for mid-level managers, although the course was not familiar to all the panel members.

The LOG 299 course is considered unimportant with a median of 3 (neither important nor unimportant) and an IQR of 3 to 4 (neither important nor unimportant to important). The panel members felt this course should be considered important with a median and IQR of 4 (important). Comments on the LOG 299 course indicate that other courses such as the Air Planning Course conducted at Maxwell AFB may be providing the same type of information. Panel members indicated this course should be good for officers in positions that would support a contingency operation.

The pattern of responses for the PCE courses covered in the second round questionnaire requires some analysis. First, the possibility of instrumental affect, in the way of bad questions, cannot be ruled out. The median responses for how important the AFIT PCE courses are when considering transportation officer career progression changed from 4 (important) for four of the courses, after the first round questionnaire to 3 (neither important nor unimportant) after the second round questionnaire. While the questions asked during the first round questionnaire got a preliminary

concensus of the senior transportation officers, adding course descriptions to the questions during the second round questionnaire caused some disagreement in the responses from the second round. Second, even though it appears that no concensus on PCE exsists, there is some feeling that the idea of continuing education is important when considering the career progression of transportation officers.

Part II. Table 15 presents the response data for Part II of the second round questionnaire. The first section to be analyzed in this part concerned the importance of the Graduate Transportation Management (GTM) program at AFIT. For this question, both how important the GTM program is and how important the GTM should be was assessed. The GTM program is considered important with a median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important). The panel indicated the GTM program should be important with the median of 4 (important) and an IQR of 3 to 4 (neither important nor unimportant to important).

The second section to be analyzed under Part II was the weighting of the factors identified as important from the first round questionnaire. The weights were calculated by adding the points allocated to a factor and then dividing this number by the number of panel members. The weights for each of the factors were: job performance--.457; being a squadron commander--.137; having a staff assignment--.083;

TABLE 15
ROUND TWO RESPONSES - PART II

WEIGHTING OF IMPORTANT VARIABLES

\VAR / C		IMP OF GTM PRGM CURNT	SHD-BE	TOURS	PCS	SQ CC	STAFF	MAJCOMS	PME	PCE	MASTER'S WHEN	TYPE	RANK	JOB
A	01	4	4	5	5	15	10	10	10			5	5	35
S	02	4	5	5		5								90
E	03	3	4	5	4	8	7	4	5	3	1	1	2	60
S	04													
	05	3	4	6	7	20	19	8	10	4	3	9	5	9
	06	3	4	4	8	3	2	3	3	1	1	2	3	70
	07	3	4	5	5	10	10	5	15	7	3	3	2	35
	08	4	3	2	1	6	7	2	5	2	2		3	70
	09	3	4	4	8	3	2	3	3	1	1	2	3	70
	10	3	3	1	2	7	10	10	10	5		5		50
	11	3	4	10	10	10	10	10	10	5	5		5	25
	12	2	4	5	2	20	15	10	15	2	2	2	2	25
	13	4	3	10	10	15	10	2				3		50
	14	4	2	5	20	15	5	5	15		5	5		25
	15	4	4	5	2	20	15	4	15	6	2	5	1	25
	16	4	4	5	5	25	10	5	5	5	2.5	2.5	10	25
	17	4	3	5	5	20	5	3	0.4	0.4	0.4	0.4	0.4	60
	18	2	2			20			10			10		60
	19	4	4	5	3	15	10	2	6	2	2	3	2	50
	20	4	4											
	21	1	1			30	10							60
	22	2	2	5	5	10	10	5	5			5	5	50
	23	4	4	8	10	10	8	11	8	7	7	9	7	15
	24													
MEDIAN		4	4											
1ST QUAR		3	3											
3RD QUAR		4	4											
WEIGHT				0.048	0.053	0.137	0.083	0.049	0.072	0.024	0.018	0.034	0.026	0.457

completion of PME--.072; changing duty locations--.053; the number of MAJCOMs served--.049; overseas tours--.048; type of master's degree--.034; how long rank is held--.026; completion of logistics PCE courses--.024; and timing of a master's degree--.018.

Summary

This chapter discussed the findings from the two-round Delphi procedure conducted for this research. Each question was discussed individually.

The panel members identified 10 of the 20 factors listed in the first round questionnaire as being important for the career progression of transportation officers. In addition to these factors, the senior transportation officers identified job performance as being a factor needing to be added to the list of factors considered when looking at the career progression of transportation officers.

The second round questionnaire was broken down into two parts. The first part was used to reconfirm the findings from the first questionnaire. The second part of the questionnaire was used to determine: 1) how important the AFIT GTM program is; and 2) how important, relatively, do the panel members consider the factors from the first round questionnaire.

V. Conclusions and Recommendations

Introduction

With the analysis of the two questionnaires accomplished, this chapter combines the output from these questionnaires to form conclusions about the findings and provide recommendations of areas needing further study. The conclusions consist of reviewing: 1) the factors determined to be important to the career progression of transportation officers; 2) the change in career progression model suggested by these findings; 3) how job performance can be measured from historical data; and 4) how the AFIT GTM program can be changed to better meet the needs of the transportation career field. Recommendations for further research fall under the areas of job performance measurement and career progression measurement.

Conclusions

Career Progression Variables. The first section of the conclusion lists the factors considered important from both questionnaires. These factors are listed by the weighting given to them by the panel members with the highest weight being first. Table 16 displays the factors identified by senior transportation officers as important in the career progression of transportation officers.

Job performance was identified as the number one factor to be considered when looking at the career

Table 16: Transportation Officer Career Progression Factors

Factor	Weight
Job Performance	.457
Squadron Commander	.137
Staff Assignment	.083
PME	.072
Changing Duty Locations	.053
Number of Major Commands	.049
Overseas Tours	.048
Master's Degree - Type	.034
Holding Rank	.026
PCE Courses	.024
Master's Degree - Timing	.018

progression of transportation officers. This factor carried a weight of .457, indicating that the senior transportation officers placed the majority of emphasis on job performance when discussing the factors that influence the career progression of transportation officers.

The problem with the use of this factor comes from the ability to measure job performance historically. Job performance questions were intentionally omitted from the first round questionnaire due to the traditional "1" ratings received by the majority of transportation officers and the consequent inability to distinguish between officers based on OER ratings. With the amount of weight placed on this factor, there should be an easier way to identify how a transportation officer has performed, other than reviewing

OER's or calling previous bosses, which were identified as the primary means used by senior transportation officers.

The second most important factor was being a squadron commander. The weight for this factor was .137. Consensus for this factor identified the 12 year point as the average time for becoming a squadron commander with a window between 10 and 13.5 years. This would equate to a senior captain/junior major according to the transportation career field professional development chart.

The third factor listed in order of weighting was having a staff assignment. The weighting for this factor was .083. Estimates for this factor identified the 10 year point as the average timing for a staff billet with a window between 8 and 10 years. This equates to a senior captain according to the transportation career field development chart.

The fourth factor in importance when considering the career progression of transportation officers was Professional Military Education (PME) with a weight of .072. PME was broken down by the three levels: 1) Squadron Officer School (SOS); 2) Air Command and Staff College (ACSC) or Intermediate Service School (ISS); and 3) Air War College (AWC) or Senior Service School (SSS).

The average timing for SOS was identified as the 5 year point with a window from 4.5 to 6 years. This fits the change in PME requirements for SOS in-residence, this being

an officer now has to be a captain. The time period of 4.5 to 6 years also indicates that an officer might not want to complete SOS by correspondence when eligible at the two year point but instead wait until sometime after making captain at the four year point.

For ACSC or ISS the timing was identified as the 12 year point with a window between the 10.5 and 13 year points. The range identified for ACSC or ISS indicates that this PME should be considered while a senior captain or after selection to major. Here again, it does not look as though an officer has to immediately complete the PME.

For AWC or SSS the timing was identified as the 17 year point with a window between the 16 and 18.5 year points. These times follow the requirements outlined to attend the AWC, this being notification of selection to lieutenant colonel.

In addition to the importance of completing PME, the factor of how PME is completed was identified as important with in-residence completion being considered favorable over correspondence. A second factor of PME, the attendance of sister-service PME courses was not considered as being important when looking at the career progression of transportation officers.

The fifth factor was how often an officer should change duty locations (PCS), and was weighted at .053. For how often an officer changes duty locations, the average period

of time was identified as 3 years with a window between 3 and 3.5 years. The reasoning for this length of time as one panel member indicated was to ensure officers "don't skip out before the things they thought they 'fixed' come back and bite them (which normally occurs after two years)."

The sixth factor was the number of major commands served. This factor had a weight of .049. In the area of major commands, the number of commands that should have been served in was identified by rank. For a captain--2 commands; major--3 commands; lieutenant colonel--3.75 commands, and, colonel--4 commands. What this displays is the breadth that should be accumulated as a transportation officer. Unlike officers in a number of career fields who are limited to the number of bases and commands to which they can be assigned, a transportation officer performs a number of different jobs and can be readily assigned to any of the major commands.

The seventh factor of importance is the number of overseas tours, and was weighted .048. This question was based on a 20 year career and asked the number of overseas short and long tours an officer should have during this period. Two tours for each type was identified as the average for both short and long tours, but the window for short tours ranged between one and two tours. Based on this information, a transportation officer should expect an overseas assignment once every 10 years for overseas long

tours and 1, possible 2 overseas short tours during a 20 year period of time.

The eighth factor of importance was identified as the type of master's degree a transportation officer obtains, and was weighted .034. Of the six general categories of degrees listed, a Logistics Management degree was ranked at the top of the list with Business Administration and Management degrees tying for second. An Engineering degree was ranked fourth, a Sciences degree as fifth, and a Liberal Arts degree was ranked as sixth. This follows the change in Air Force policy from "filling a square" to obtaining education that will benefit an officer in the way of enhanced job performance and completion of the Air Force mission.

The ninth factor of importance was the length of time an officer holds a rank before it starts to affect career progression and was weighted at .026. The estimates provided by the panel members on the length of time for holding rank was listed by rank. For a captain--8 years; major--5 years; lieutenant colonel--6 years and colonel--8 years. This closely parallels the transportation career field professional development chart pictured on page 9, but extends the chart to show the ranks of lieutenant colonel and colonel.

The tenth factor was Professional Continuing Education (PCE) and was weighted at .024. The PCE courses overviewed

in the Delphi procedure were: 1) Senior Transportation Executive Development Program (LOG 092); 2) Introduction to Logistics (LOG 199); 3) Logistics Managers and Computer Simulation (LOG 221); 4) Logistics Management (LOG 224); and 5) Combat Logistics (LOG 299). There was some disagreement in the responses between the first and second round questionnaires, identifying the possibility of instrument affect. All but one of the PCE courses was considered important after the first round questionnaire, but after the second round questionnaire PCE courses had become unimportant when considering the career progression of transportation officers. Although there does not appear to be a concesus on these PCE courses, these is some feeling that the idea of continuing education is important when considering the career progression of transportation officers. From reading the responses for this factor, the AFIT faculty needs to do a better job of marketing their programs by informing senior leaders of the purpose for these courses and what benefits can be expected from an officer attending these courses. At the same time the target market, the officers the courses are designed for, needs to be informed of what is available that they pursue the opportunity to attend the courses. The attendance of PCE courses reinforces the "job performance" change in policy with PCE courses used to enhance the capability of officers to perform their jobs.

The last factor weighted was when, in years, a master's degree should be obtained by an officer, and was weighted .018. The majority of panel members identified the 8 year point as the average time to obtain a master's degree. There was a window identified from 6 to 8 years. This would equate to a mid to senior level captain and would come at a time when officers would have a better idea of their career intentions.

Career Progression Model. The initial picture of career progression used in this study was patterned after the "whole person" concept. Figure 5 represents this "whole person" concept with the transportation officer in the middle and the areas which shape the officer's career surrounding the transportation officer. For this study, these areas were broken down into: 1) job factors; 2) professional military education; 3) education; 4) other military qualities; and 5) demographics.

After the first round questionnaire was analyzed, it was evident that a change has occurred in how senior transportation officers view the career progression of transportation officers, but it was not clear as to the shape of the model. After the first round the model had changed from the "whole person" model displayed in Figure 5 to what looked like a "modified whole person" model with the majority of emphasis for career progression placed on one of the areas--job performance. This "modified whole person"

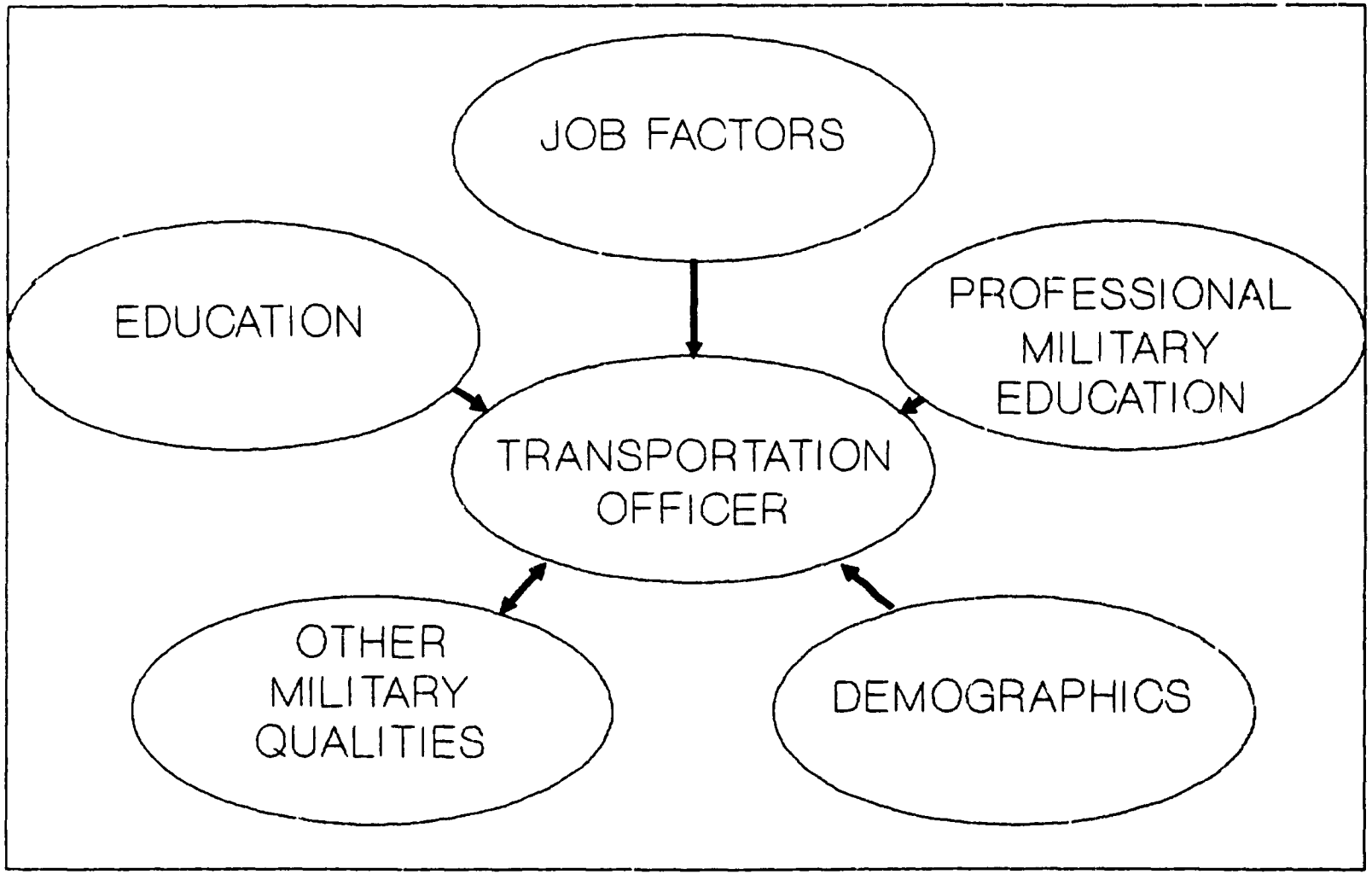


Figure 5: "Whole Person" Model

model is displayed in Figure 6. This figure shows that the area of demographics was removed from the model and the area of job performance brought into the model. After the first round analysis, job performance was interpreted as an equal to the other four areas even though it was given more consideration in the career progression of transportation officers.

After the second round questionnaire was analyzed, changes in how the model should be viewed had once again occurred. These changes were brought about from comments made by the senior transportation officers who stated job performance is the most important factor in career progression and all other factors either affect the way a job is performed or are outcomes from the way a job is performed. The "job performance" model, developed after the response analysis of both questionnaires, is pictured in Figure 7. This supports the changes that have occurred in Air Force policy since the second half of 1988. The change in policy redirects an officer's career progression thinking from the "whole person" concept to a "job performance" concept.

Measuring Job Performance. Job performance was identified from the first round questionnaire as a critically important factor when considering the career progression of transportation officers. The only problem with adding this factor to the model is not being able to

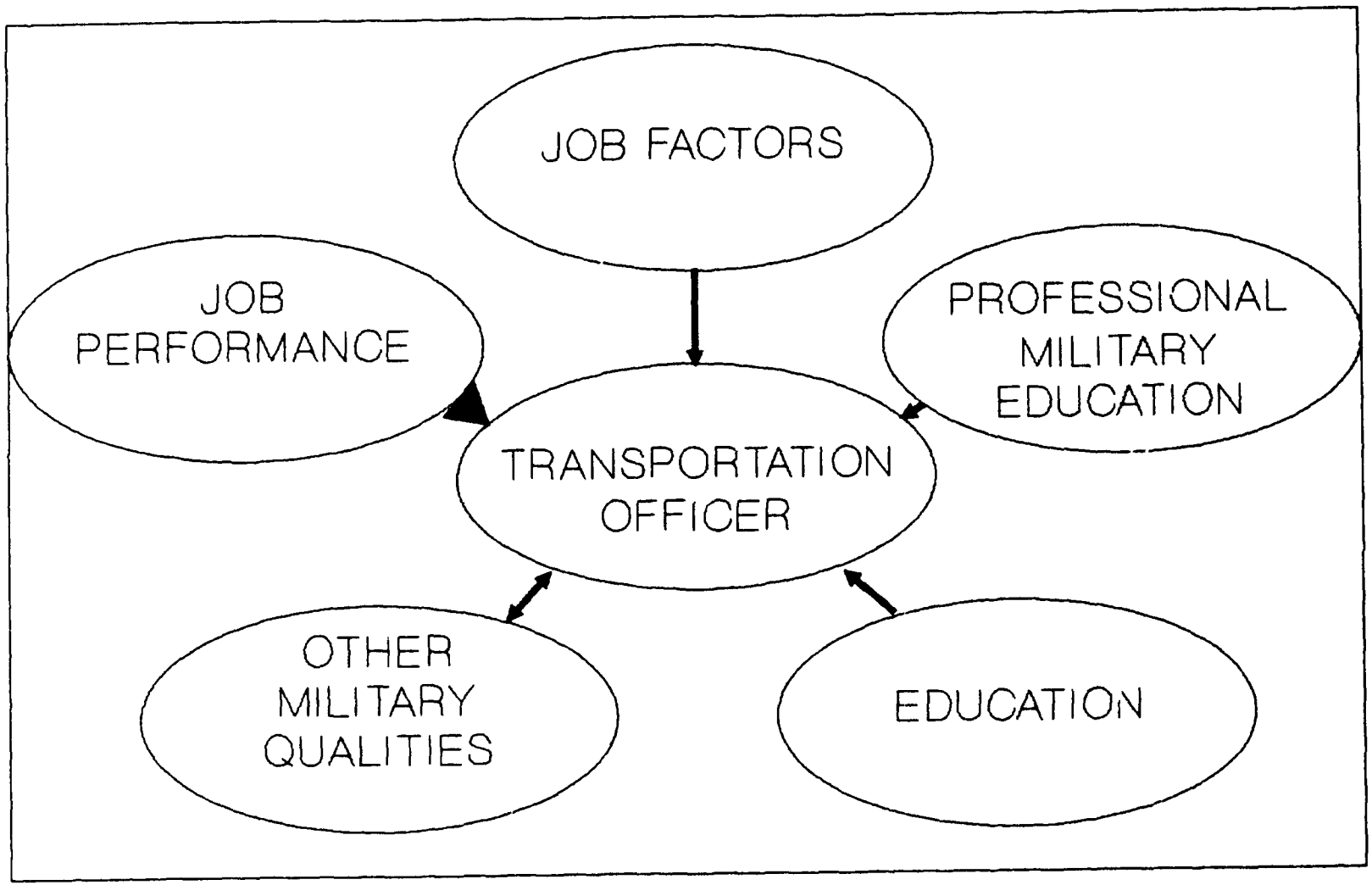


Figure 6: "Modified Whole Person" Model

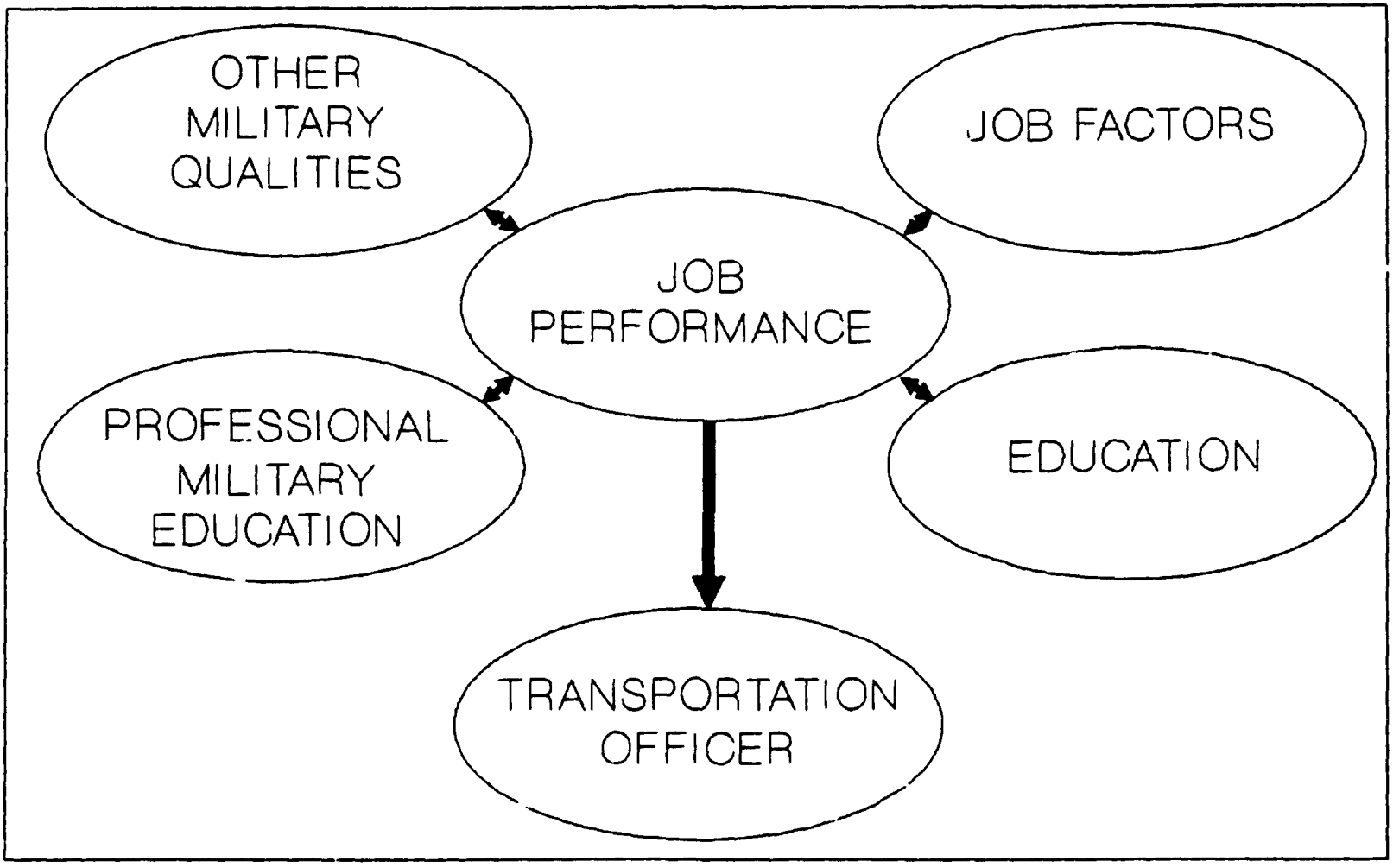


Figure 7: "Job Performance" Model

accurately assess job performance from an Officer Career Brief. Panel members were asked during the second round questionnaire to identify if Officer Career Briefs provided historical data reflective of job performance and to indicate what other sources, if any, they used to determine job performance. In addition, panel members were asked to identify other historical methods which could be used to measure the job performance of transportation officers.

The majority of the panel members did not consider the Officer Career Brief to be an accurate way of measuring job performance. There were two ways indicated for determining the job performance of transportation officers. One method, the only historical method, was reading Officer Effectiveness Reports (OERs). OERs are used by looking at the level of endorser, job descriptions, and what is said about the officer in the OER. Not mentioned as look at were the qualitative or quantitative ratings. The other method was getting information about an officer by word of mouth. Talking to previous supervisors gets direct feedback about the capabilities of an officer. Using either of these methods for assessing job performance makes the model more complicated due to the fact that more than just an Officer Career Brief is necessary for evaluating the career progression of a transportation officer.

Graduate Transportation Management (GTM) Program. The source of a master's degree, whether AFIT sponsored in-

-residence, AFIT sponsored civilian institution, or non-AFIT sponsored was not considered, by itself, important by the panel members. When AFIT sponsored education is combined and then compared with non-AFIT sponsored education, AFIT becomes the preferred source of a master's degree for transportation officers. The combining of AFIT sponsored in-residence and AFIT sponsored civilian institution is logical due to the fact that AFIT sponsored civilian institutions are no longer an option for transportation officers looking for a GTM type degree. This separation of AFIT education was included in this research because of the number of senior transportation officers who had the opportunity to take advantage of an AFIT sponsored education; but, at a civilian institution. By combining the two types of AFIT sponsored education, AFIT is clearly the preferred method for a transportation officer to obtain an advanced degree. With AFIT identified as the preferred method for obtaining an advanced degree, it can also be said that the AFIT GTM program adds value to the career progression of a transportation officer.

To better understand how the AFIT GTM program is viewed when considering job performance, the senior transportation officers were asked to provide their views on: 1) how the AFIT GTM program is currently viewed; 2) how the AFIT GTM program can be changed to better meet the needs of the

transportation career field and the Air Force, and 3) how interest in attending AFIT can be increased.

The panel members were consistent in their views of the AFIT GTM program in that they did not consider the school from which a degree was received, but focused on the performance of officers with advanced degrees when considering the career progression of transportation officers. The type of degree a transportation officer obtains was also identified as important from the first round questionnaire.

With the source of master's degree identified as unimportant--whether it be AFIT sponsored in-residence, AFIT sponsored civilian institution, or non-AFIT sponsored--the reason it is considered unimportant needs to be addressed. AFIT is the Air Forces' school and as such should be producing to fulfill Air Force needs. With this focused education, officers better able to perform on the job should be produced. The lack of preference by the panel members indicates one of two situations, either the coursework being offered in the GTM program is not fulfilling the needs of the transportation career field or the senior transportation officers are not completely familiar with the training being provided by AFIT.

When asked how the AFIT GTM program can be changed to better meet the needs of the transportation career field and the Air Force, the panel members indicated a number of changes. The more prominent ideas were: 1) sending only

senior captains and majors; 2) referencing more AF experiences and applications; and, 3) having senior transportation officers assign thesis topics in the areas which research needs to be conducted.

When asked how interest in the AFIT GTM program could be increased, the number one response was through advertisement. AFIT should be marketed as a product with the officers AFIT is trying to attract as the target market. Another comment made by one panel member was to "recognize graduates annually for a special/or significant contribution to USAF transportation."

Recommendations

Job Performance Measurement. Job performance is weighted as being almost half of the consideration in the career progression of transportation officers. For job performance to have such a large portion of the consideration in career progression, there is not an accurate historical method for measuring job performance. Two suggestions are provided for attempting to measure job performance.

The first suggestion is to have senior transportation officers prioritize a list of job positions (by command, etc.) to determine if job performance can be measured by the jobs an officer has held. The second suggestion is to have senior transportation officers design a career progression

path identifying what positions should be held during each stage in a career to see if this is a viable way of measuring job performance. Job performance in both cases being correlated to career progression--an increase in the importance of the job titles indicating successful progression of an officer's career. If measurable, this method could be used with Officer Career Briefs to determine the career progression of transportation officers.

Career Progression Measurement. The factors identified in this research are the factors considered important at this particular instance in time. Because of the dynamic nature of the factors which are identified as being important, it is necessary to continually "fine tune" the factors to ensure the career progression of transportation officers is accurately being measured.

Summary

This chapter combined the outputs from the two-round Delphi procedure to form conclusions of the study. Recommendations for further study were then provided.

Conclusions from this research were divided into four sections. First, the factors identified as important when considering the career progression of transportation officers were reviewed. Second, the change in career progression models as a result from the change in AF policy was reviewed. Third, how job performance can be measured

from historical data was reviewed. Finally, how the AFIT GTM program can be changed to better meet the needs of the transportation career field were reviewed.

Two areas of recommendations for further research were then provided. The first area was job performance measurement with this area identifying possible ways of measuring job performance from historical data. The second area was career progression measurement and indicated that the measurement of factors considered important is dynamic, needing continual "fine tuning" of current factors as well as the addition or deletion of factors which either become important or no longer are a factor when considering the career progression of transportation officers.

Appendix A:

First Round Questionnaire

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6583

11 May 1989

[address]

Dear [panel member]:

Thank you for agreeing to participate in this AFIT Delphi procedure. The purpose of this research is to determine what factors affect the career progression of transportation officers and then compare these factors between transportation officers that currently hold master's degrees. You were selected to participate in this important research because your experience and insight qualify you as an "expert" in the transportation career field. Your opinions and comments will be combined with those of other "experts" to develop a descriptive career progression model for graduate transportation officers.

The attached Delphi questionnaire solicits your personal opinions in a number of areas. To assist in this research, please complete the questionnaire and return it in the enclosed envelope within 10 days. As soon as all the responses are compiled, a second Delphi questionnaire will be mailed to you.

Your comments, suggestions, and ideas regarding this research and the model are welcome and encouraged. If you have any questions about this Delphi procedure, please call me at (513) 255-4149 (AV 785-4149) or Lt David Pierce at (513) 427-0824. Thank you for taking the time to share your expertise.

ROBERT E. TREMPE, Lt Col, USAF
Director
Graduate Transportation Programs
School of Systems and Logistics

2 Atch
1. Delphi Survey
2. Return Envelope

Delphi Questionnaire - First Round

1. Survey Objectives:

To obtain expert opinion on what variables senior transportation officers view as affecting the career progression of officers in the transportation career field.

2. Definitions:

a. Transportation Officer: An active duty officer, lieutenant colonel and below, holding a primary Air Forcet Specialty Code (AFSC) of 6054 or 6016, Transportation Officer / Transportation Staff Officer.

b. Senior Transportation Officer: An active duty officer who has had a primary AFSC of 6016, Staff Transportation Officer; has had at least 10 years of experience in the transportation career field; has had command experience sometime during his/her career; and is currently at the director level at an air force major command (MAJCOM) or above.

c. Career Progression: The upward movement in rank and increased responsibility given to transportation officers as outlined in Chapter 24 of AFR 36-23, Officer Career Development and as described by senior transportation officers.

3. General Comments:

a. Please fill out the questionnaire in the manner most convenient to you (pen, pencil, type-written).

b. Your participation and honest opinions are key to the success of this research project. There are no right or wrong answers. Therefore, all your ideas and brainstorming comments should be included. In later rounds of questioning, these ideas may spark additional comments by other participants.

c. After this round, one additional round of questioning will be needed to arrive at a group consensus. Each round should not take more than one hour of your time. After each round, all participants' responses will be compiled and given back to you at the start of the next round. You will be provided an executive summary of this research after it is completed.

d. Please remember all responses are completely confidential and anonymous and will be destroyed upon conclusion of this research. The number on the questionnaire will be used to provide you with your responses from the first round questionnaire during the second round of questioning, when the mean of the group response will also be provided to you. Thank you for your participation.

Indicate the length of time, in years, a transportation officer should spend at an assignment.

	minimum	average	maximum
assignment length			

How important is the length of time that a transportation officer spends at an assignment when considering career progression? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the length of time spent at an assignment and the career progression of transportation officers.

Indicate how often, in years, a transportation officer should have an overseas assignment.

	years
Overseas Short	
Overseas Long	

How important is having an overseas assignment when considering a transportation officer's career progression?
(circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Comment on your views concerning overseas assignments and the career progression of transportation officers.

Indicate how often, in years, a transportation officer should change duty locations (PCS).

	minimum	average	maximum
assignment length			

How important is going PCS when looking at the career progression of a transportation officer? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the effect of assignment length on the career progression of transportation officers.

At what time period, in total years of commissioned service, should a transportation officer enter into the following assignments.

	minimum	average	maximum
Squadron Commander			
Staff Assignment			

How important are squadron commander assignments when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning squadron commander assignments and the career progression of transportation officers.

_____

_____

_____

How important are staff assignments when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning staff assignments and the career progression of transportation officers.

_____

_____

_____

Indicate, in years, the length of time a transportation officer can spend in a MAJCOM before developing command identity.

	years
Time in MAJCOM	

How important is command identity when considering the career progression of a transportation officer? (circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Comment on your views of command identity and the career progression of transportation officers.

Indicate the number of different MAJCOMs a transportation officer should have been assigned to for the ranks indicated.

	MAJCOMs
Captain	
Major	
Lt. Colonel	
Colonel	

How important is serving in a number of MAJCOMs when considering a transportation officer's career progression? (circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Comment on your views concerning the number of MAJCOMs served and the career progression of a transportation officer.

Assess, in years, the time in which a transportation officer should complete the following professional military education (PME) courses?

	years		
	min	avg	max
Squadron Officers School			
Air Command and Staff College or other Intermediate Service School			
Air War College or other Senior Service School			

The following questions deal with PME courses in general and not any particular PME course.

How important are PME courses when considering the career progression of transportation officers? (Circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the attendance of PME courses and the career progression of transportation officers.

How important is it to complete PME courses in-residence versus correspondence? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the attendance of PME courses in-residence versus correspondence.

_____

_____

_____

_____

How important is the completion of sister-service PME courses (e.g. Army Command and General Staff College, Naval War College) when considering the career progression of transportation officers? (circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Comment on your views concerning the attendance of sister-service PME courses and the career progression of transportation officers.

_____

_____

_____

_____

How important are the following AFIT professional continuing education (PCE) courses when considering career progression? Circle the number below the course title using the following scale:

0 - Unfamiliar
1 - Highly Unimportant
2 - Unimportant
3 - Neither Important Nor Unimportant
4 - Important
5 - Highly Important

LOG 092 Senior Transportation Executive Development Program

0 1 2 3 4 5

LOG 199 Introduction to Logistics

0 1 2 3 4 5

LOG 221 Logistics Managers and Computer Simulation

0 1 2 3 4 5

LOG 224 Logistics Management

0 1 2 3 4 5

LOG 299 Combat Logistics

0 1 2 3 4 5

Comment on your views concerning the attendance of PCE courses and the career progression of transportation officers.

Rank the following list of undergraduate fields of study by what you feel to be the most desirable field in which a transportation officer holds a degree (1) to what you feel to be the least desirable field in which a transportation officer holds a degree (6).

Field of Study	Rank
Business Admin.	
Engineering	
Liberal Arts	
Logistics Management	
Sciences	
Management	

In what field is your undergraduate degree? _____

How important is the field of study for an undergraduate degree in determining the career progression of a transportation officer? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the field of study for an undergraduate degree and the career progression of transportation officers.

_____

_____

_____

At what time period do you feel a transportation officer should consider obtaining a master's degree?

	years		
	minimum	average	maximum
Master's Degree			

How important is obtaining a master's degree in determining the career progression of transportation officers? (circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Comment on your views concerning the pursuit of a master's degree and the career progression of transportation officers.

Rank the following list of masters degree fields of study by what you feel to be the most desirable field in which a transportation officer should pursue a masters degree (1) to what you feel to be the least desirable field in which a transportation officer should pursue a masters degree (6).

Field of Study	Rank
Business Admin.	
Engineering	
Liberal Arts	
Logistics Management	
Sciences	
Management	

In what field is your graduate degree? _____

How important is the field of study for a masters degree in determining the career progression of a transportation officer? (circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Comment on your views concerning the field of study for an undergraduate degree and the career progression of transportation officers.

_____

_____

_____

_____

Rank the following sources of a masters degree by which you feel to be the most desirable source (1) to what you feel to be the least desirable source (3) when considering a transportation officer's career progression.

	Rank
AFIT In-residence	
AFIT Civilian Inst.	
Non-AFIT	

How important is the source of a masters degree in determining the career progression of a transportation officer? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the source of obtaining a master's degree and the career progression of transportation officers.

Rank the following list by what you feel to be the most desirable source for a transportation officer's commission (1) to what you feel to be the least desirable source for a transportation officer's commission (4)?

	Rank
U.S.A.F. Academy	
ROTC	
OTS	
Other Military Academy	

How important is the source of an officer's commission in determining the career progression of that officer? (circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Comment on your views concerning the source of a transportation officer's commission and career progression.

How important is being commissioned as a distinguished graduate in determining the career progression of a transportation officer? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning being commissioned as a distinguished graduate and career progression.

_____

_____

_____

_____

How important is being a prior enlisted member in determining career progression? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning being prior enlisted and career progression.

_____

_____

_____

_____

List any age limits you feel exist for a transportation officer holding a particular rank before it starts affecting that officer's career progression.

	age		
	minimum	average	maximum
Captain			
Major			
Lt. Colonel			
Colonel			

How important is age in determining a transportation officer's career progression? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning age and career progression.

Rank each of the following operational ratings from what you feel is the most important in a transportation officers career progression (1) to what you feel is the least important in a transportation officers career progression (5).

	Rank
Pilot	
Navigator	
Missile Launch Officer	
Other Rating	
Non-rated	

How important is holding an operational rating when determining the career progression of a transportation officer? (circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Comment on your views concerning the holding of an operational rating and the career progression of transportation officers.

How long, in years, can an officer hold a particular rank before it interferes with their career progression?

	Maximum Years
Captain	
Major	
Lt. Colonel	
Colonel	

How important is the length of time an officer has holds a particular rank when considering the career progression of a transportation officer? (circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Provide any additional comments you have on the length of time in which a transportation officer holds a particular rank.

Indicate the number of awards and decorations a transportation officer should hold for a particular rank as well as the highest decoration for a particular rank.

	Total	Highest Award
Captain		
Major		
Lt. Colonel		
Colonel		

How important is the number of awards and decorations a transportation officer holds when considering career progression? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the number of awards and decorations and the career progression of transportation officers.

_____

_____

_____

_____

_____

_____

Rank the regions of the United States from where you feel the most successful transportation officers come from (1) to where you feel the least successful transportation officers come from (10).

	Rank
Outside CONUS (Hawaii & Alaska)	
Pacific (California, Oregon, & Washington)	
Mountain (New Mexico, Arizona, Colorado, Utah, Nevada, Idaho, Wyoming, & Montana)	
West North Central (N. Dakota, S. Dakota, Minnesota, Iowa, Nebraska, Kansas, & Missouri)	
West South Central (Oklahoma, Arkansas, Texas, & Louisiana)	
East North Central (Illinois, Indiana, Ohio, Michigan, & Wisconsin)	
East South Central (Mississippi, Alabama, Tennessee, & Kentucky)	
South Atlantic (Florida, Georgia, S. Carolina, N. Carolina, Virginia, W. Virginia, Maryland, Delaware, & Washington, D.C.)	
Middle Atlantic (Pennsylvania, New York, & New Jersey)	
New England (Maine, Vermont, New Hampshire, Massachusetts, Connecticut, & Rhode Island)	

How important is the region from which a transportation officer comes from in determining that officer's career progression? (circle one)

5	4	3	2	1
highly important	important	neither important nor unimportant	unimportant	highly unimportant

Comment on your views concerning the region from which a transportation officer comes from and career progression.

_____

_____

_____

_____

_____

_____

How important is the marital status of a transportation officer when considering career progression? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the marital status of transportation officers and their career progression.

Indicate any other variables, such as; gender, number of dependents, and/or religious preference, that you feel should be considered when considering the career progression of a transportation officer.

In this survey, I have mentioned many of the factors that can have an influence on a transportation officer's career. I am certain that additional factors came to mind while you were in the process of completing this questionnaire. Please list these factors in the space provided below and rank them in order of importance with number one being the most important. Please add any remarks that will clarify your selections.

Is there anything else you would like to add?

Appendix B:

Second Round Questionnaire

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6583

3 July 1989

[address]

Dear [panel member]:

Thank you for your response from the first questionnaire. The information received from all of the panel members was insightful and helped to expand the view of career progression that a transportation officer should have; from one of square filling, to one of job performance.

This second round questionnaire consists of two parts. The first part provides feedback on the questions the panel members felt were important from the first round questionnaire, and seeks to confirm the consensus developed on those issues. The second part solicits additional information about those areas that panel members felt were important in transportation officer career progression, and seeks to relate these to job performance and its measurement.

As with the first questionnaire, the second questionnaire solicits your personal opinions in a number of areas. To assist in this research, please complete the questionnaire and return it in the enclosed envelope within 10 days. Your participation will end with the return of this questionnaire.

Your comments, suggestions, and ideas regarding this research and the model are welcome and encouraged. If you have any questions about this Delphi procedure, please call me at (513) 255-4149 (AV 785-4149) or Lt David Pierce at (513) 427-0824. Thank you for taking the time to share your expertise.

ROBERT E. TREMPE, Lt Col, USAF
Director
Graduate Transportation Programs
School of Systems and Logistics

2 Atch
1. Delphi Survey
2. Return Envelope

Delphi Questionnaire - Second Round

1. Survey Objectives:

To obtain expert opinion on what variables senior transportation officers view as affecting the career progression of officers in the transportation career field.

2. Definitions.

a. Transportation Officer: An active duty officer, lieutenant colonel and below, holding a primary Air Force Specialty Code (AFSC) of 6054 or 6016, Transportation Officer/Transportation Staff Officer.

b. Senior Transportation Officer: An active duty officer who has had a primary AFSC of 6016, Staff Transportation Officer; has had at least 10 years of experience in the transportation career field; has had command experience sometime during his/her career; and is currently at the director level at an Air Force major command (MAJCOM) or above.

c. Career Progression: The upward movement in rank and increased responsibility given to transportation officers as outlined in Chapters 1 through 4 and 24 of AFR 36-23, Officer Career Development, and as described by senior transportation officers.

3. General Comments:

a. Please fill out the questionnaire in the manner most convenient to you (pen, pencil, type-written).

b. Your participation and honest opinions are key to the success of this research project. There are no right or wrong answers. Therefore, all your ideas and brainstorming comments should be included.

c. Your participation will end with the return of this questionnaire. This questionnaire should not take more than one hour of your time. You will be provided an executive summary of this research after its completion.

d. Please remember all responses are completely confidential and anonymous and will be destroyed upon conclusion of this research. The number on the questionnaire will be used for matching your second round responses with your first round responses. Thank you for your participation.

Question:
Indicate the total number of short and long-term assignments a transportation officer should have over a 20 year period.

Previous Panel Response:
The way this question was worded, the total number of overseas assignments, over a 20 year period, would equate to:

	Median	Range
Overseas Short	2	2 - 3.1
Overseas Long	2.5	2 - 2.9

Comments received concerning overseas assignments are summarized below.

- An officer must demonstrate a willingness to move and not be labeled as a "homesteader".

- Because the transportation career field is almost one to one, CONUS and overseas, it is incumbent to "pay your dues".

- An officer can not appreciate customer and system needs unless he/she works all aspects.

- Important only in contingencies.

- Overseas tours should be standardized with the option of a one year extension.

Additional Questions:
Indicate, in the space provided, the total number of short and long-term overseas assignments a transportation officer should have over a 20 year period.

	Number
Overseas Short	
Overseas Long	

Do you have any additional views concerning the overseas assignments and the career progression of transportation officers?

Question:
Rank the following sources of a master's degree by which you feel to be the most desirable source to what you feel to be the least desirable source when considering a transportation officer's career progression.

Previous Panel Response:
Rankings from the first round indicated a slight preference for AFIT in-residence as the master's degree source. Comments received from the first round questionnaire concerning the source of obtaining a master's degree are summarized below.

- Source is becoming very important. AFIT in--residence does the best job of providing job specific functional training -- which should improve subsequent job performance.

- The major and what a person does with the education should be looked at, not the school.

- There is more to gain from an MBA program at a good school than an AF-tailored program at AFIT.

- Civilian institution programs are needed badly in lieu of AFIT at WPAFB. Interfaces are needed with the civil sector to gain exposure to new ideas, concepts, and ways of doing business.

- The in-residence AFIT program does center more on military needs and developmment, however it does not interface with the civilian side of the industry.

Additional Questions:
Rank the following sources of a master's degree by which you feel to be the most desirable source (1) to what you feel to be the least desirable source (3) when considering a transportation officer's career progression.

	Rank
AFIT (in-residence)	
AFIT (civilian institute)	
Self-Sponsored (civilian institute)	

In the first round, there was no consensus on the importance or unimportance of the source of a master's degree. Please answer the following question in light of the comments about degree source noted above.

How important is the source of a master's degree in determining the career progression of a transportation officer? (circle one)

Previous round median: 3 50% Range: 2 - 4

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on the factors that you feel influence the selection of the source of a master's degree.

The following five pages consist of questions pertaining to professional continuing education (PCE) courses offered at the Air Force Institute of Technology (AFIT).

Previous Panel Response:
Some of the comments received concerning the attendance of PCE courses and the career progression of transportation officers follows:

- An officer should take every opportunity to learn and grow. These courses can help an officer become a better leader.

- These courses are worthwhile and are very good -- yet none of them have gained a reputation that a transporter would lie, cheat, steal, or do otherwise to gain entrance.

- All of these courses are good when the timing is right and the material learned can be applied to work.

- A single course does not have a significant bearing.

- These courses may be important, but I am not familiar with most of them.

Since at least one panel member was unfamiliar with each of the PCE logistics courses listed in the first round questionnaire, the following pages give descriptions of these PCE courses and then asks questions about the importance of such courses when considering the career progression of transportation officers. Please answer these questions based on the course description provided, regardless of your familiarity or unfamiliarity with the course described.

LOG 092
SENIOR TRANSPORTATION EXECUTIVE DEVELOPMENT PROGRAM

To increase the effectiveness of selected Air Force transportation executives occupying senior management positions. Provides senior Air Force transportation executives with the latest developments in national policies, management techniques, and new technologies affecting the commercial transportation and physical distribution disciplines. Areas of emphasis include national transportation policies and their impact on Air Force transportation activities; current theories/techniques regarding human and physical resources management; state-of-the-art developments in the transportation field; and new productivity improvement initiatives. The course will also provide a conceptual framework for applying computer/communication technology, along with supporting practical experience. Managerial decision-making ability will be sharpened by improving qualitative judgment and providing insights into the development of data upon which decisions are based. In addition, current transportation issues affecting the DOD/Air Force transportation community will be discussed. Executives will increase their understanding of both military and commercial physical distribution systems, and will gain insight into the motivation and strategies employed by the commercial transportation industry Teaching methods include lectures, seminars, workshops, and case analyses.

How important do you feel this course is when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

How important do you feel this course should be when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the LOG 092 course and the career progression of transportation officers.

_____

_____

_____

LOG 199
INTRODUCTION TO LOGISTICS

Designed to prepare Air Force personnel for entry into the logistics field by providing a conceptual overview of Air Force logistics, the environment including organizations involved, planning, the integration of logistics systems, functions, principles, processes and issues.

Addresses the roles and meaning of logistics including the combat support aspect, logistics in a system context, functions, principles, processes, overview of security assistance, the organizations involved, planning, financial management, systems acquisition, integrated logistics support, contracting management, supply management (base and depot), logistics support analysis, cataloging, requirements determination and forecasting techniques, provisioning, item management, system management application, equipment maintenance, reliability and maintainability and contemporary and future issues.

How important do you feel this course is when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

How important do you feel this course should be when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the LOG 199 course and the career progression of transportation officers.

_____

_____

_____

LOG 221
LOGISTICS MANAGERS AND COMPUTER SIMULATION

This course provides logistics managers with practical knowledge of simulation, and with practical insights into what computer simulation can do to improve logistics decisions. This course is designed to provide logistics managers with a basic background in the use of computer simulation. The course is intended for personnel involved in planning and evaluating alternatives and in improving logistics management systems, operations, processes, and procedures. It is problem oriented and structured to give guided "hands on" experience in problem definition, input data evaluation, use of simulation languages, and output data analysis. The relationship between simulation and other management science techniques is introduced. In addition, the concepts of experimentation, time sharing, measures of logistics systems performance, and fundamental behavior characteristics of logistics systems are introduced. The practical and fundamental aspects of logistics, simulation, and modeling are stressed throughout. Lectures, seminars, case method, and computer facility visits and demonstrations are augmented by guest speakers. This course is intensive and is purposely designed for an interchange among participants. Six to seven hours are spent in the classroom each day, with approximately three hours required for daily outside reading and preparation. Late afternoon and evening sessions at the computer terminals are also scheduled periodically during the course.

How important do you feel this course is when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

How important do you feel this course should be when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the LOG 221 course and the career progression of transportation officers.

_____

_____

_____

LOG 224
LOGISTICS MANAGEMENT

Designed to broaden and enhance the understanding of logistics management at various levels throughout the Air Force. Directed to the critical examination of interrelationships and interdependencies that prevail in strategic, support, and operational logistics. In these contexts, strategic logistics entails the interrelationships of strategy and logistics and the influence they exert upon each other at the national level; support logistics is concerned largely with the acquisition of systems and their contingent supply, equipment, and allied support functions; operational logistics relates to the direct functional support of the Air Force in the operational environment.

Course design enables students to comprehend the rationale behind the logistics decisions that they may be called upon to make. Heavy emphasis is placed on the applied management techniques used in the acquisition, distribution, and support of weapon systems. Specific attention is given to line and staff management and the forces that drive the logistics systems at all levels. A major share of the course is devoted to direct student involvement in practical exercises, examples, cases, workshops, and simulations. These exercises enable the student to apply the theory given during the lecture and seminar sessions. Management tools and analytical techniques including ADP, simulation, forecasting, and performance measurement evaluation are used by the student in achieving the goals and objectives of the exercises.

How important do you feel this course is when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

How important do you feel this course should be when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the LOG 224 course and the career progression of transportation officers.

_____

_____

_____

LOG 299
COMBAT LOGISTICS

Provides an overview of the wartime roles and responsibilities of the logistics manager and an understanding of how logistics contributes to the overall war effort. Provides an introduction to combat logistics planning, strategies, and contingency procedures that will likely be implemented in a wartime scenario.

Logistics in wartime, lessons learned in WWII, Korea, Vietnam, and other conflicts; current procedures and concepts including depot surge, aircraft battle damage repair, combat supply, logistics C3, prepositioning, combat environment, Airland battle, strategic mobility, and Soviet logistics. Planning includes a review of mobilization exercises, JOPS deliberate planning, Crisis Action System, and the Joint Deployment Agency; logistics impact on operation planning. Students complete a simulated force planning process including transportation feasibility estimates and shortfall resolution. Concludes with an examination of near term logistics systems and the logistics environment of the future.

How important do you feel this course is when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

How important do you feel this course should be when considering the career progression of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the LOG 299 course and the career progression of transportation officers.

_____

_____

_____

PART II

This part of the questionnaire will be divided into three sections. The first section will solicit your views on how job performance can be measured from historical data. The second section will solicit your views on how the AFIT Graduate Transportation Management (GTM) program can be changed to better meet the needs of the Air Force. And the third section will consist of a list of the variables that have been identified as being important from the first questionnaire and asks you to weight these variables as to their relative importance.

From the first round questionnaire, job performance was mentioned as the number one variable that should be examined when looking at the career progression of transportation officers. The importance of this variable is confirmed in Air Force Regulation (AFR) 36-23, Officer Career Development, where it is stated that the "most important indicator of potential is the way an officer performs daily on the job.". Keeping job performance of a transportation officer in mind, please answer the following questions.

Does an officer's AF Form 1715, Officer Brief, provide historical data reflective of the job performance of that officer? Please comment.

What other sources would you (do you) use when determining the job performance of a transportation officer? Please comment.

Most concede that OERs are of limited value when measuring job performance. Is this true? If so, is there any historical method of measuring the job performance of a transportation officer?

How important do you feel the AFIT Graduate Transportation Management (GTM) program <u>is</u> when considering the job performance of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

How important do you feel the AFIT GTM program <u>should be</u> when considering the job performance of transportation officers? (circle one)

1	2	3	4	5
highly unimportant	unimportant	neither important nor unimportant	important	highly important

Comment on your views concerning the AFIT GTM program as it currently stands when considering the job performance of transportation officers.

Comment on how you feel the AFIT GTM program can be changed to better meet the needs of the transportation career field and the Air Force.

Comment on how you feel AFIT can increase the interest of transportation officers to apply for the GTM program.

In this section of Part II, a list of the items that the majority of panel members felt were important in the career progression of a transportation officers is provided. Given a total of 100 points, weigh each of the items in the list by the percentage of these points showing how important you feel an item is in the career progression of a transportation officer.

	Points
Overseas Tours	_____
Changing Duty Locations	_____
Being a Squadron Commander	_____
Having a Staff Assignment	_____
The Number of MAJCOMs Served	_____
Completion of PME	_____
Completion of LOG PCE Courses	_____
Timing of a Master's Degree	_____
Type of Master's Degree	_____
How Long a Rank is Held	_____
Job Performance	_____

Total points allocated should equal 100.

Comment on your views concerning the list of items that the majority of panel members felt were important when considering the career progression of transportation officers.

_____

_____

_____

_____

_____

_____

Is there anything else you would like to add to this last round of questioning?

THANK YOU FOR YOUR PARTICIPATION.

Appendix C:

Round One Descriptive Statistics

Statistics on the importance of the length of time spent at an assignment and the career progression of transportation officers.

DESCRIPTIVE STATISTICS

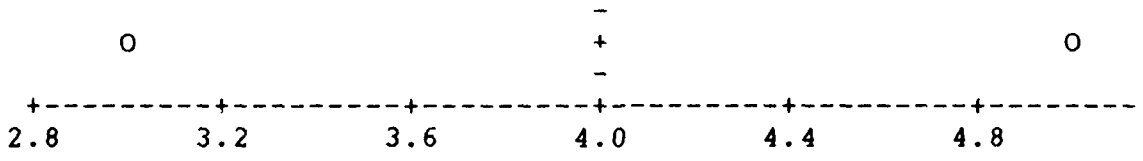
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
ASSNLEN	3.909	4.264E-01	22	4.000	3.000	5.000

FREQUENCY DISTRIBUTION OF ASSNLEN

VALUE	N	
3	3	|***
4	18	|******************
5	1	|*

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR ASSNLEN



Statistics on the importance of having an overseas assignment when considering a transportation officer's career progression.

DESCRIPTIVE STATISTICS

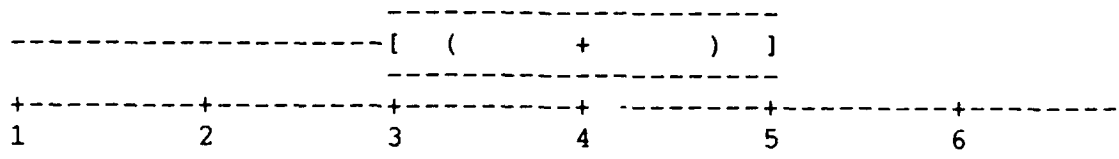
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
TOURS	3.636	1.329	22	4.000	1.000	5.000

FREQUENCY DISTRIBUTION OF TOURS

VALUE	N	
1	2	|**
2	3	|***
3	3	|***
4	7	|*******
5	7	|*******

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR TOURS



Statistics on the importance of changing duty locations when looking at the career progression of a transportation officer.

DESCRIPTIVE STATISTICS

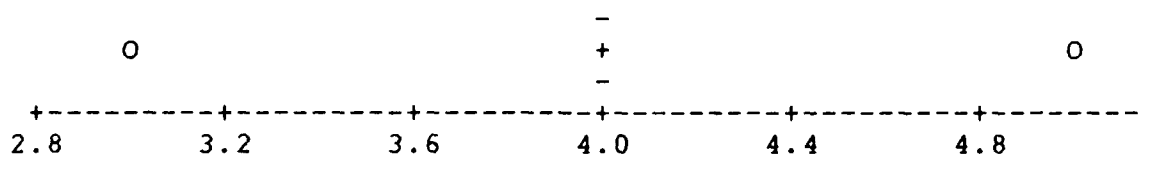
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
PCS	3.864	4.676E-01	22	4.000	3.000	5.000

FREQUENCY DISTRIBUTION OF PCS

VALUE	N	
3	4	|****
4	17	|**********
5	1	|*

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR PCS



Statistics on the importance of squadron commander assignments when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

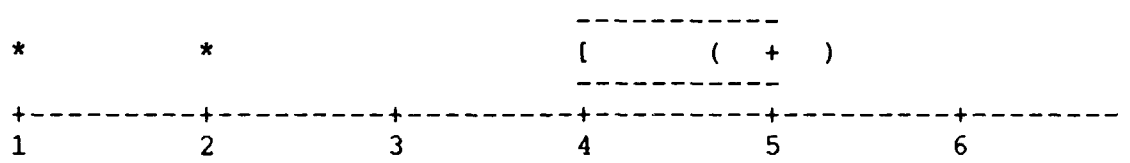
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
SQUADRON	4.455	1.057	22	5.000	1.000	5.000

FREQUENCY DISTRIBUTION OF SQUADRON

VALUE	N	
1	1	|*
2	1	|*
4	5	|*****
5	15	|***************

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR SQUADRON



Statistics on the importance of staff assignments when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

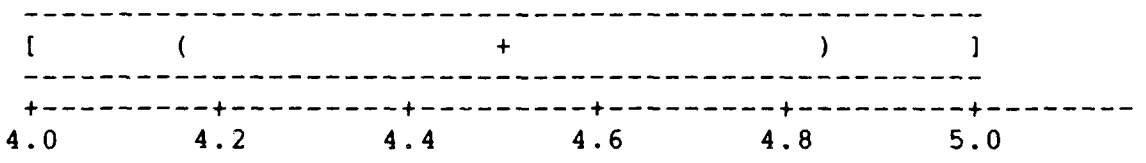
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
STAFF	4.500	5.118E-01	22	4.500	4.000	5.000

FREQUENCY DISTRIBUTION OF STAFF

VALUE	N	
4	11	|**********
5	11	|**********

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR STAFF



Statistics on the importance of command identity when considering the career progression of a transportation officer.

DESCRIPTIVE STATISTICS

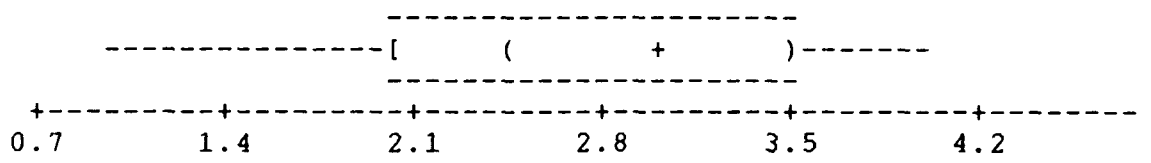
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
MAJCOM	2.675	1.004	20	3.000	1.000	4.000

FREQUENCY DISTRIBUTION OF MAJCOM

VALUE	N	
1	3	|***
2	6	|******
3	6	|******
4	5	|*****

NON-MISSING	20
MISSING	4
TOTAL	24

WHISKER PLOT FOR MAJCOM



Statistics on the importance of serving in a number of major commands when considering a transportation officer's career progression.

DESCRIPTIVE STATISTICS

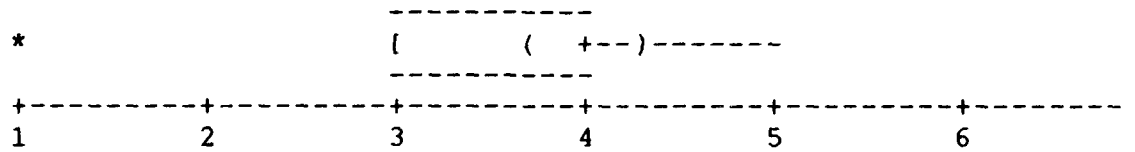
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
NUMMAJCOM	3.524	1.365	21	4.000	1.000	5.000

FREQUENCY DISTRIBUTION OF NUMMAJCOM

VALUE	N	
1	4	|****
3	2	|**
4	11	|**********
5	4	|****

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR NUMMAJCOM



Statistics on the importance of PME courses when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

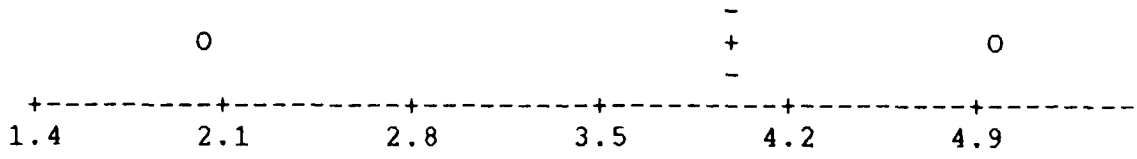
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
PME	4.136	6.396E-01	22	4.000	2.000	5.000

FREQUENCY DISTRIBUTION OF PME

VALUE	N	
2	1	|*
4	16	|**********
5	5	|*****

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR PME



Statistics on the importance of completing PME courses in--residence versus correspondence.

DESCRIPTIVE STATISTICS

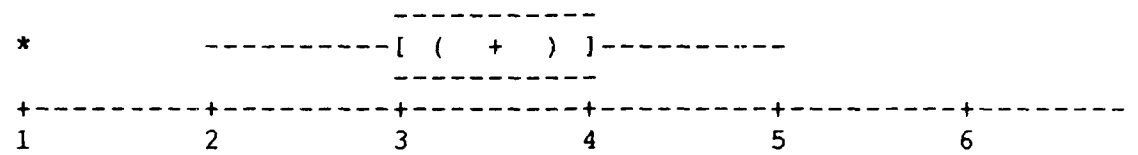
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
HOWCOMP	3.409	1.141	22	3.500	1.000	5.000

FREQUENCY DISTRIBUTION OF HOWCOMP

VALUE	N	
1	1	|*
2	4	|****
3	6	|******
4	7	|*******
5	4	|****

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR HOWCOMP



Statistics on the importance of completing sister-service PME courses (e.g. Army Command and General Staff College, Naval War College) when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

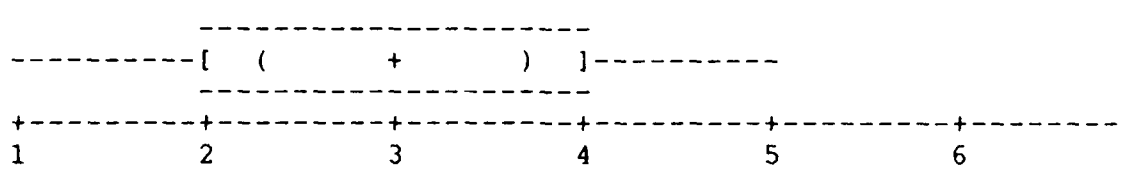
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
SISPME	2.773	1.152	22	3.000	1.000	5.000

FREQUENCY DISTRIBUTION OF SISPME

VALUE	N	
1	4	|****
2	4	|****
3	8	|********
4	5	|*****
5	1	|*

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR SISPME



Statistics on the importance of the LOG 092 PCE course when considering career progression.

DESCRIPTIVE STATISTICS

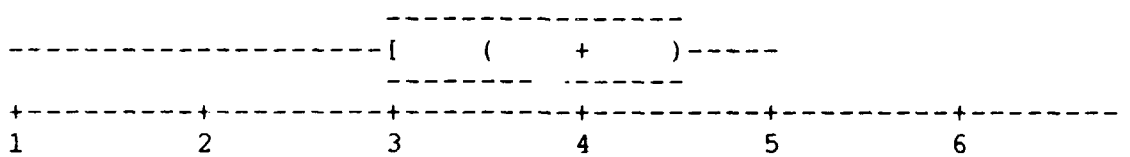
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
LOG092	3.650	1.089	20	4.000	1.000	5.000

FREQUENCY DISTRIBUTION OF LOG092

VALUE	N	
1	1	|*
2	1	|*
3	7	|*******
4	6	|******
5	5	|*****

NON-MISSING	20
MISSING	4
TOTAL	24

WHISKER PLOT FOR LOG092



Statistics on the importance of the LOG 199 PCE course when considering career progression.

DESCRIPTIVE STATISTICS

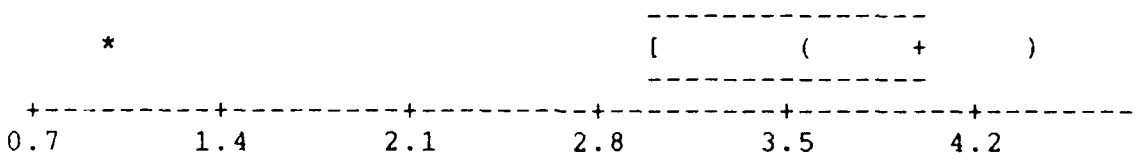
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
LOG199	3.400	8.281E-01	15	4.000	1.000	4.000

FREQUENCY DISTRIBUTION OF LOG199

VALUE	N	
1	1	|*
3	6	|******
4	8	|********

NON-MISSING	15
MISSING	9
TOTAL	24

WHISKER PLOT FOR LOG199



Statistics on the importance of the LOG 221 PCE course when considering career progression.

DESCRIPTIVE STATISTICS

VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
LOG221	3.269	8.321E-01	13	3.000	1.000	4.000

FREQUENCY DISTRIBUTION OF LOG221

VALUE	N	
1	1	|*
3	7	|*******
4	5	|*****

NON-MISSING	13
MISSING	11
TOTAL	24

WHISKER PLOT FOR LOG221

```
                                    ---------------
     *                      (      +      )        ]
                                    ---------------
  +---------+---------+---------+---------+---------+---------+--------
0.7       1.4       2.1       2.8       3.5       4.2
```

Statistics on the importance of the LOG 224 PCE course when considering career progression.

DESCRIPTIVE STATISTICS

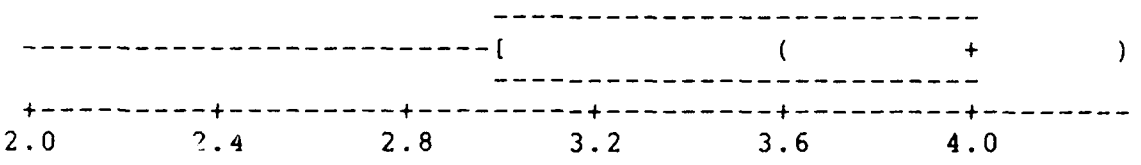
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
LOG224	3.467	6.399E-01	15	4.000	2.000	4.000

FREQUENCY DISTRIBUTION OF LOG224

VALUE	N	
2	1	|*
3	6	|******
4	8	|********

NON-MISSING	15
MISSING	9
TOTAL	24

WHISKER PLOT FOR LOG224



Statistics on the importance of the LOG 299 PCE course when considering career progression.

DESCRIPTIVE STATISTICS

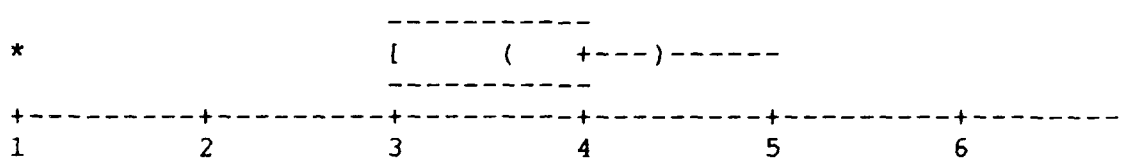
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
LOG299	3.600	0.986	15	4.000	1.000	5.000

FREQUENCY DISTRIBUTION OF LOG299

VALUE	N	
1	1	|*
3	5	|*****
4	7	|*******
5	2	|**

NON-MISSING	15
MISSING	9
TOTAL	24

WHISKER PLOT FOR LOG299



Statistics on the importance of the field of study for an undergraduate degree in determining the career progression of a transportation officer.

DESCRIPTIVE STATISTICS

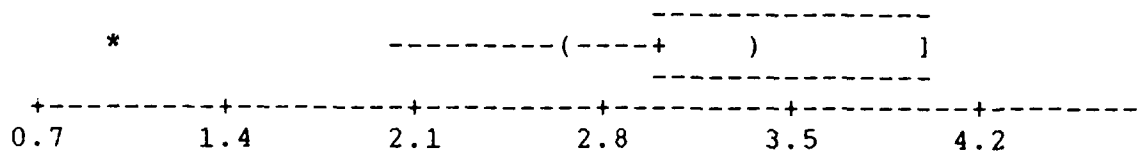
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
UNDERGRAD	3.000	9.258E-01	22	3.000	1.000	4.000

FREQUENCY DISTRIBUTION OF UNDERGRAD

VALUE	N	
1	2	|**
2	3	|***
3	10	|**********
4	7	|*******

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR UNDERGRAD



Statistics on the importance of obtaining a master's degree in determining the career progression of transportation officers.

DESCRIPTIVE STATISTICS

VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
MASTERS	4.091	7.502E-01	22	4.000	2.000	5.000

FREQUENCY DISTRIBUTION OF MASTERS

VALUE	N	
2	1	|*
3	2	|**
4	13	|**********
5	6	|******

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR MASTERS

```
                                        ---------------
          *             ---------(-----+     )         ]
                                        ---------------
 +---------+---------+---------+---------+---------+---------+---------
1.4       2.1       2.8       3.5       4.2       4.9
```

Statistics on the importance of the field of study for a master's degree in determining the career progression of a transportation officer.

DESCRIPTIVE STATISTICS

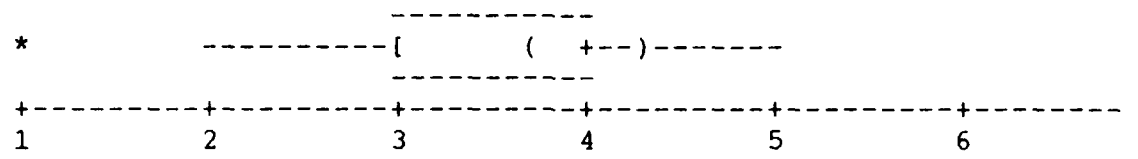
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
GRAD	3.545	1.101	22	4.000	1.000	5.000

FREQUENCY DISTRIBUTION OF GRAD

VALUE	N	
1	2	|**
2	1	|*
3	5	|*****
4	11	|**********
5	3	|***

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR GRAD



Statistics on the importance of the source of a master's degree in determining the career progression of a transportation officer.

DESCRIPTIVE STATISTICS

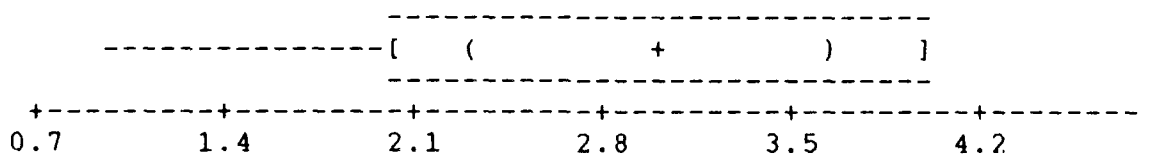
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
DEGSOURCE	2.955	1.046	22	3.000	1.000	4.000

FREQUENCY DISTRIBUTION OF DEGSOURCE

VALUE	N	
1	3	|***
2	3	|***
3	8	|********
4	8	|********

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR DEGSOURCE



Statistics on the importance of the source of an officer's commission in determining the career progression of that officer.

DESCRIPTIVE STATISTICS

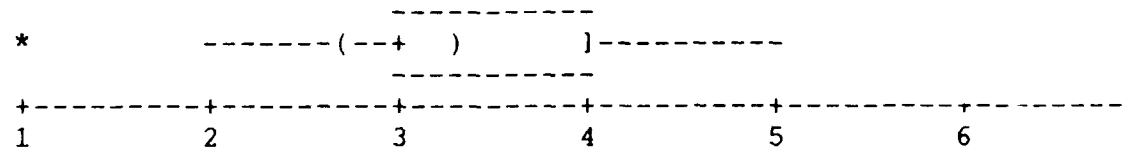
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
COMSOURCE	3.364	0.953	22	3.000	1.000	5.000

FREQUENCY DISTRIBUTION OF COMSOURCE

VALUE	N	
1	1	|*
2	2	|**
3	9	|*********
4	8	|********
5	2	|**

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR COMSOURCE



Statistics on the importance of being commissioned as a distinguished graduate in determining the career progression of a transportation officer.

DESCRIPTIVE STATISTICS

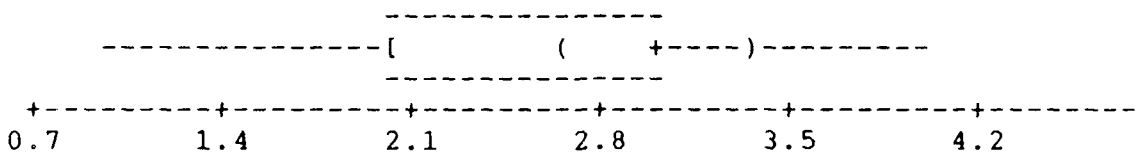
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
DG	2.682	9.455E-01	22	3.000	1.000	4.000

FREQUENCY DISTRIBUTION OF DG

VALUE	N	
1	3	|***
2	5	|*****
3	10	|**********
4	4	|****

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR DG



Statistics on the importance of being a prior enlisted member in determining career progression.

DESCRIPTIVE STATISTICS

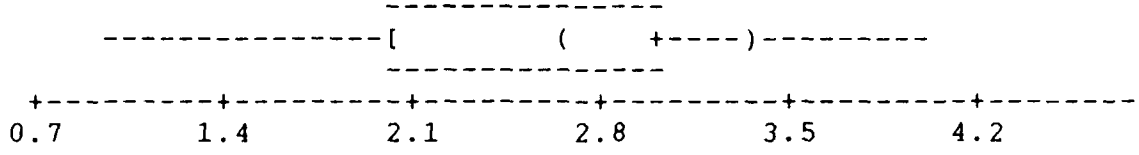
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
PRIOR	2.636	7.267E-01	22	3.000	1.000	4.000

FREQUENCY DISTRIBUTION OF PRIOR

VALUE	N	
1	1	|*
2	8	|********
3	11	|***********
4	2	|**

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR PRIOR



Statistics on the importance of age in determining a transportation officer's career progression.

DESCRIPTIVE STATISTICS

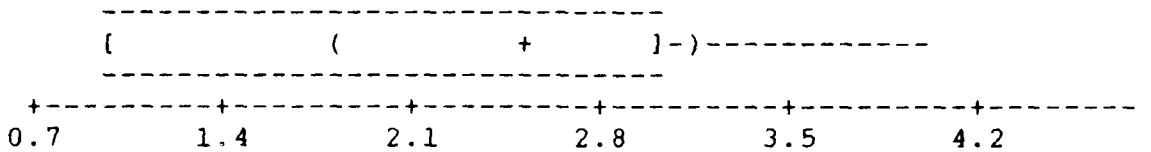
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
AGELIM	2.318	0.995	22	2.500	1.000	4.000

FREQUENCY DISTRIBUTION OF AGELIM

VALUE	N	
1	6	|******
2	5	|*****
3	9	|*********
4	2	|**

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR AGELIM



Statistics on the importance of holding an operational rating when determining the career progression of a transportation officer.

DESCRIPTIVE STATISTICS

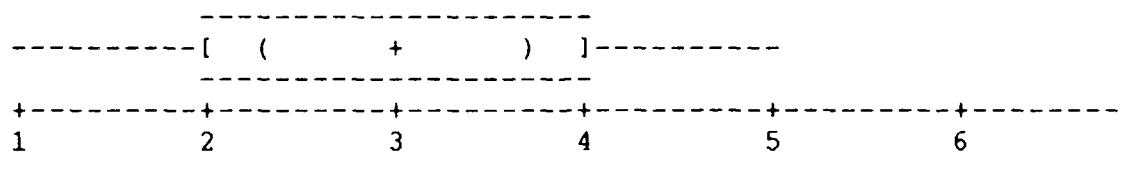
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
OPRATING	3.095	0.995	21	3.000	1.000	5.000

FREQUENCY DISTRIBUTION OF OPRATING

VALUE	N	
1	1	|*
2	5	|*****
3	7	|*******
4	7	|*******
5	1	|*

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR OPRATING



Statistics on the importance of the length of time an officer has held a particular rank when considering the career progression of a transportation officer.

DESCRIPTIVE STATISTICS

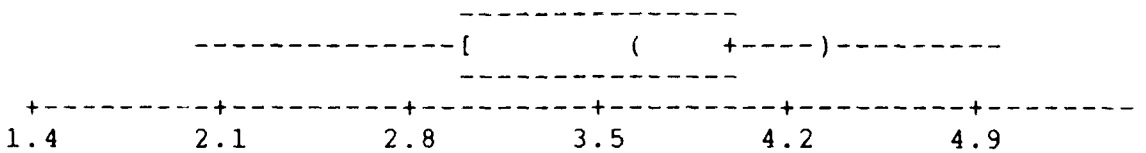
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
HOLDRANK	3.700	8.013E-01	20	4.000	2.000	5.000

FREQUENCY DISTRIBUTION OF HOLDRANK

VALUE	N	
2	2	|**
3	4	|****
4	12	|**********
5	2	|**

NON-MISSING	20
MISSING	4
TOTAL	24

WHISKER PLOT FOR HOLDRANK



Statistics on the importance of the number of awards and decorations a transportation officer holds when considering career progression.

DESCRIPTIVE STATISTICS

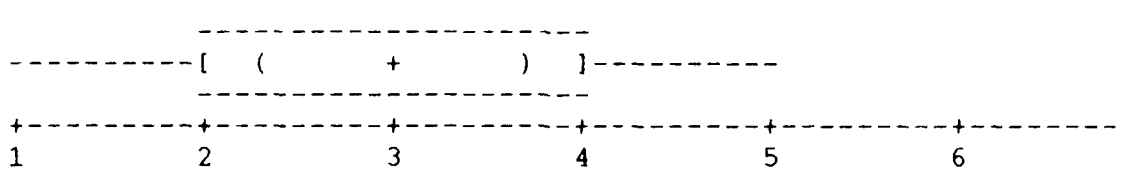
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
AWARDS	2.952	1.244	21	3.000	1.000	5.000

FREQUENCY DISTRIBUTION OF AWARDS

VALUE	N	
1	4	|****
2	3	|***
3	5	|*****
4	8	|********
5	1	|*

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR AWARDS



Statistics on the importance of the region from which a transportation officer comes from in determining that officer's career progression.

DESCRIPTIVE STATISTICS

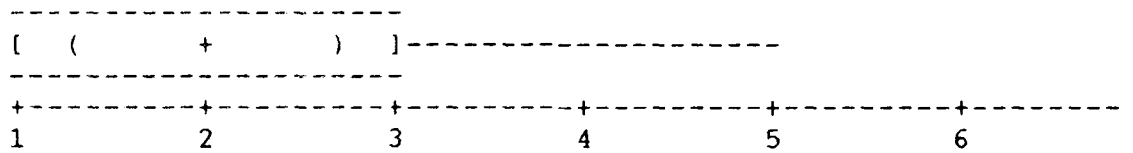
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
REGIONS	2.095	1.411	21	2.000	1.000	5.000

FREQUENCY DISTRIBUTION OF REGIONS

VALUE	N	
1	10	|**********
2	5	|*****
3	3	|***
5	3	|***

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR REGIONS



Statistics on the importance of the marital status of a transportation officer when considering career progression.

DESCRIPTIVE STATISTICS

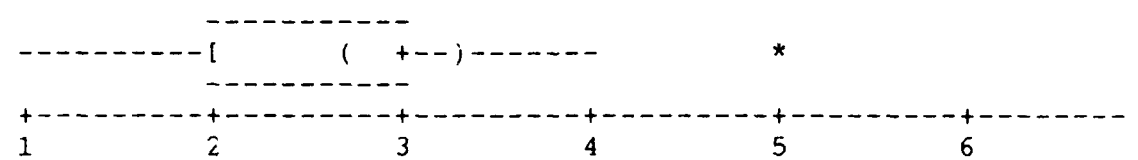
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
MSTATUS	2.714	1.056	21	3.000	1.000	5.000

FREQUENCY DISTRIBUTION OF MSTATUS

VALUE	N	
1	3	|***
2	5	|*****
3	9	|*********
4	3	|***
5	1	|*

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR MSTATUS



Appendix D:

Round One Estimate Statistics

Statistics on the estimate for how often a transportation officer should have an overseas long assignment.

DESCRIPTIVE STATISTICS

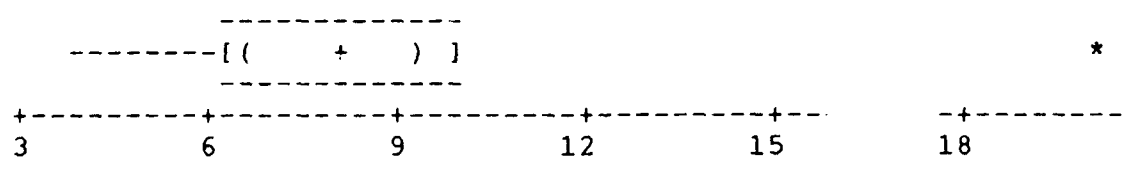
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
OSLONG	8.275	3.291	20	8.000	4.000	20.00

FREQUENCY DISTRIBUTION OF OSLONG

VALUE	N	
4	1	|*
5	1	|*
6	4	|****
7	3	|***
8	4	|****
9	1	|*
10	5	|*****
20	1	|*

NON-MISSING	20
MISSING	4
TOTAL	24

WHISKER PLOT FOR OSLONG



Statistics on the estimate for how often a transportation officer should have an overseas short assignment.

DESCRIPTIVE STATISTICS

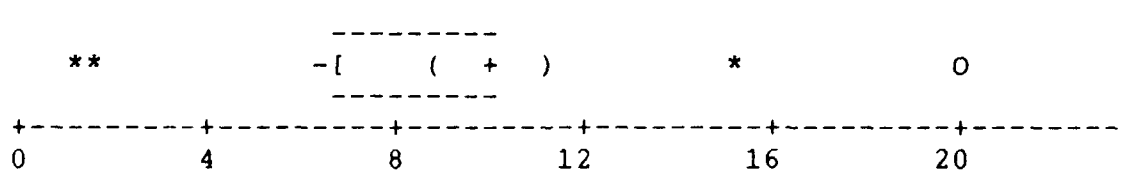
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
OSSHORT	8.950	5.117	20	10.00	1.000	20.00

FREQUENCY DISTRIBUTION OF OSSHORT

VALUE	N	
1	4	|****
6	1	|*
7	1	|*
8	2	|**
10	8	|********
15	3	|***
20	1	|*

NON-MISSING	20
MISSING	4
TOTAL	24

WHISKER PLOT FOR OSSHORT



Statistics on the estimate for how often a transportation officer should change duty locations (PCS).

DESCRIPTIVE STATISTICS

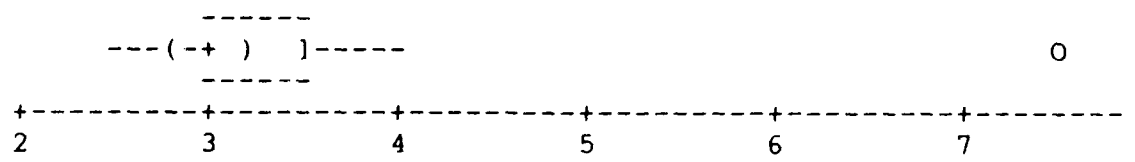
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
YRSPCS	3.352	1.008	22	3.000	2.500	7.500

FREQUENCY DISTRIBUTION OF YRSPCS

VALUE	N	
2	2	|**
3	16	|**********
4	3	|***
7	1	|*

NON-MISSING	22
MISSING	2
TOTAL	24

WHISKER PLOT FOR YRSPCS



Statistics on the estimate for when a transportation officer should enter into a squadron commander position.

DESCRIPTIVE STATISTICS

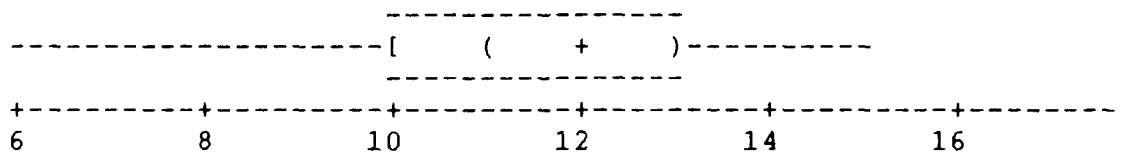
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
YRSSQCC	11.24	2.364	21	12.00	6.000	15.00

FREQUENCY DISTRIBUTION OF YRSSQCC

VALUE	N	
6	1	|*
7	1	|*
9	2	|**
10	5	|*****
11	1	|*
12	4	|****
13	3	|***
14	3	|***
15	1	|*

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR YRSSQCC



Statistics on the estimate for when a transportation officer should enter a staff assignment.

DESCRIPTIVE STATISTICS

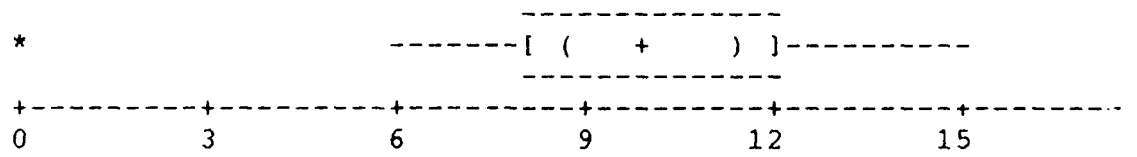
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
YRSSTAFF	9.524	3.311	21	10.00	0.000	15.00

FREQUENCY DISTRIBUTION OF YRSSTAFF

VALUE	N	
0	1	|*
6	2	|**
7	1	|*
8	4	|****
9	1	|*
10	5	|*****
12	4	|****
13	1	|*
14	1	|*
15	1	|*

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR YRSSTAFF



Statistics on the estimate for the number of different MAJCOMs a transportation officer should have for the rank of captain.

DESCRIPTIVE STATISTICS

VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
COMSCPT	1.952	7.891E-01	21	2.000	0.000	3.000

FREQUENCY DISTRIBUTION OF COMSCPT

VALUE	N	
0	1	|*
1	4	|****
2	12	|************
3	4	|****

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR COMSCPT

```
                                 --------
 O              *            (  + )     ]-------
                                 --------
 +---------+---------+---------+---------+---------+---------+
0.0       0.7       1.4       2.1       2.8       3.5
```

Statistics on the estimate for the number of different MAJCOMs a transportation officer should have for the rank of major.

DESCRIPTIVE STATISTICS

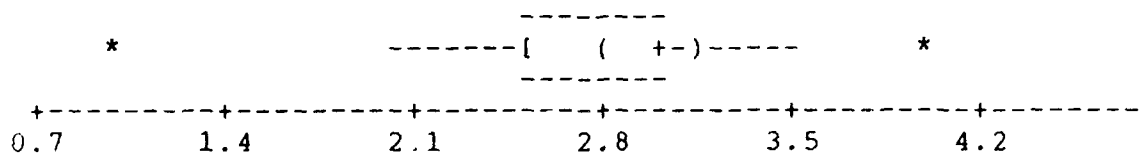
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
COMSMAJ	2.881	7.891E-01	21	3.000	1.000	4.000

FREQUENCY DISTRIBUTION OF COMSMAJ

VALUE	N	
1	1	|*
2	6	|******
3	10	|**********
4	4	|****

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR COMSMAJ



Statistics on the estimate for the number of different MAJCOMs a transportation officer should have for the rank of lieutenant colonel.

DESCRIPTIVE STATISTICS

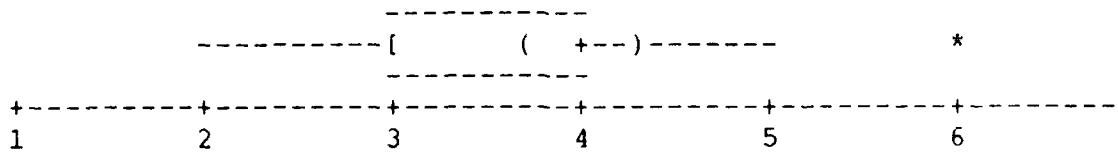
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
COMSLTC	3.690	1.054	21	4.000	2.000	6.000

FREQUENCY DISTRIBUTION OF COMSLTC

VALUE	N	
2	4	|****
3	6	|******
4	7	|*******
5	3	|***
6	1	|*

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR COMSLTC



Statistics on the estimate for the number of different MAJCOMs a transportation officer should have for the rank of colonel.

DESCRIPTIVE STATISTICS

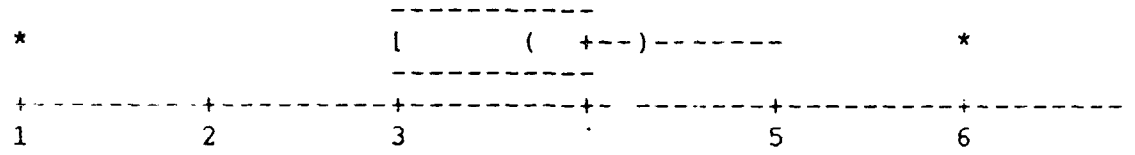
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
COMSCOL	3.571	1.434	21	4.000	1.000	6.000

FREQUENCY DISTRIBUTION OF COMSCOL

VALUE	N	
1	4	|****
3	2	|**
4	11	|**********
5	3	|***
6	1	|*

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR COMSCOL



Statistics on the estimate of the time in which a transportation officer should complete Squadron Officer School.

DESCRIPTIVE STATISTICS

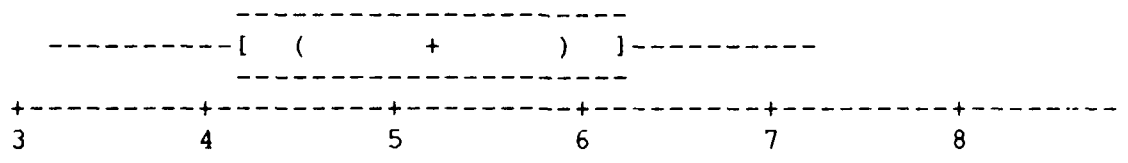
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
YRSSOS	5.143	1.246	21	5.000	3.000	7.000

FREQUENCY DISTRIBUTION OF YRSSOS

VALUE	N	
3	3	|***
4	3	|***
5	7	|*******
6	5	|*****
7	3	|***

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR YRSSOS



Statistics on the estimate of the time in which a transportation officer should complete Air Command and Staff College or other Intermediate Service School.

DESCRIPTIVE STATISTICS

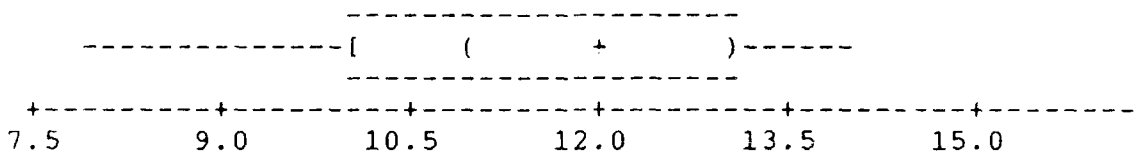
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
YRSACSC	11.24	1.814	21	12.00	8.000	14.00

FREQUENCY DISTRIBUTION OF YRSACSC

VALUE	N	
8	3	***
9	1	*
10	2	**
11	4	****
12	5	*****
13	5	*****
14	1	*

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR YRSACSC



Statistics on the estimate of the time in which a transportation officer should complete Air War College or other Senior Service School.

DESCRIPTIVE STATISTICS

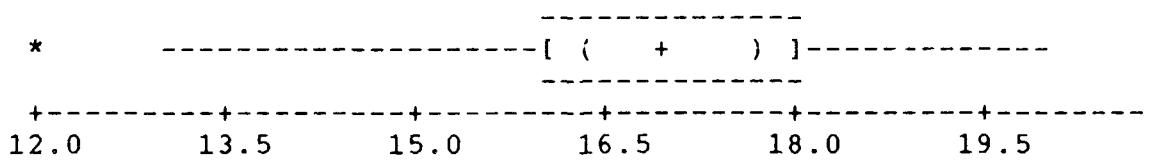
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
YRSAWC	16.90	2.047	21	17.00	12.00	20.00

FREQUENCY DISTRIBUTION OF YRSAWC

VALUE	N	
12	1	|*
13	1	|*
15	1	|*
16	6	|******
17	4	|****
18	3	|***
19	3	|***
20	2	|**

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR YRSAWC



Statistics on the estimate for when a transportation officer should consider obtaining a master's degree.

DESCRIPTIVE STATISTICS

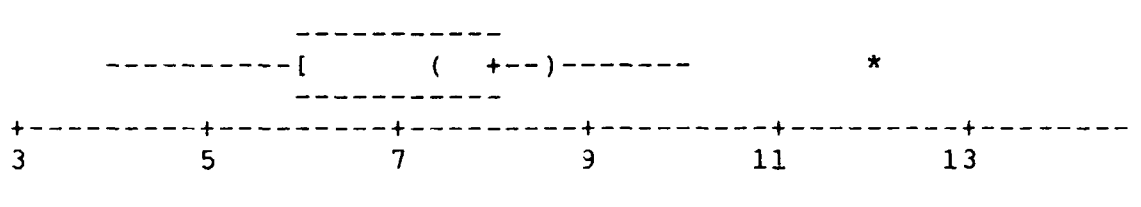
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
YRSMASTR	7.810	2.089	21	8.000	4.000	12.00

FREQUENCY DISTRIBUTION OF YRSMASTR

VALUE	N	
4	1	|*
5	1	|*
6	4	|****
7	3	|***
8	7	|*******
10	3	|***
12	2	|**

NON-MISSING	21
MISSING	3
TOTAL	24

WHISKER PLOT FOR YRSMASTR



Statistics on the estimate of how long the rank of captain can be held before it interferes with career progression.

DESCRIPTIVE STATISTICS

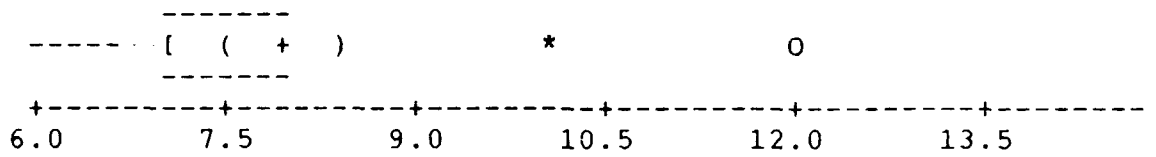
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
RANKCPT	8.154	1.676	13	8.000	6.000	12.00

FREQUENCY DISTRIBUTION OF RANKCPT

VALUE	N	
6	2	|**
7	2	|**
8	6	|******
10	2	|**
12	1	|*

NON-MISSING	13
MISSING	11
TOTAL	24

WHISKER PLOT FOR RANKCPT



Statistics on the estimate of how long the rank of major can be held before it interferes with career progression.

DESCRIPTIVE STATISTICS

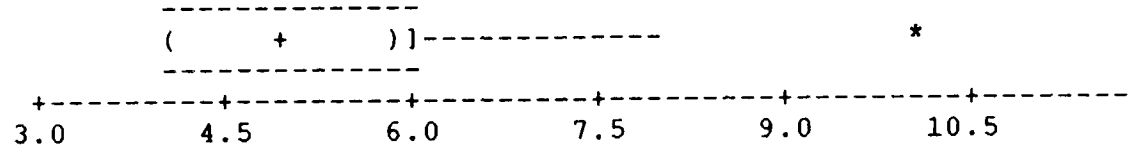
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
RANKMAJ	5.538	1.808	13	5.000	4.000	10.00

FREQUENCY DISTRIBUTION OF RANKMAJ

VALUE	N	
4	4	|****
5	5	|*****
6	1	|*
7	1	|*
8	1	|*
10	1	|*

NON-MISSING	13
MISSING	11
TOTAL	24

WHISKER PLOT FOR RANKMAJ



Statistics on the estimate of how long the rank of lieutenant colonel can be held before it interferes with career progression.

DESCRIPTIVE STATISTICS

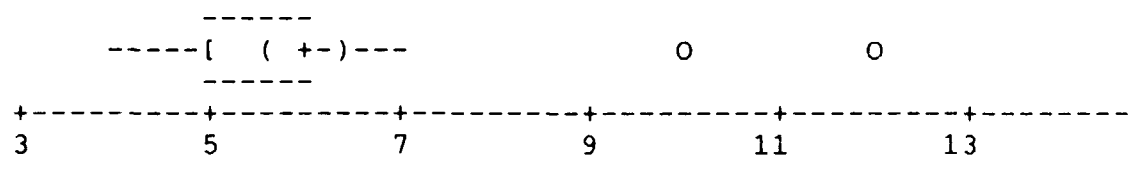
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
RANKLTC	6.231	2.315	13	6.000	4.000	12.00

FREQUENCY DISTRIBUTION OF RANKLTC

VALUE	N	
4	2	|**
5	4	|****
6	4	|****
7	1	|*
10	1	|*
12	1	|*

NON-MISSING	13
MISSING	11
TOTAL	24

WHISKER PLOT FOR RANKLTC



Statistics on the estimate of how long the rank of colonel can be held before it interferes with career progression.

DESCRIPTIVE STATISTICS

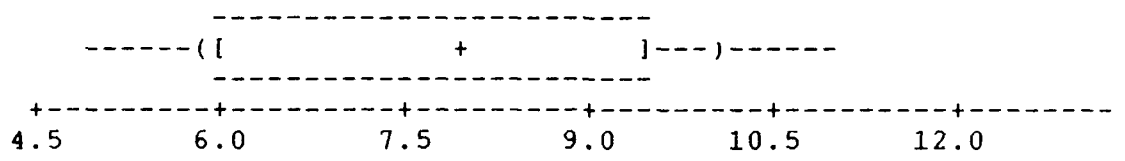
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
RANKCOL	7.857	2.268	7	8.000	5.000	11.00

FREQUENCY DISTRIBUTION OF RANKCOL

VALUE	N	
5	1	|*
6	2	|**
8	1	|*
9	1	|*
10	1	|*
11	1	|*

NON-MISSING	7
MISSING	17
TOTAL	24

WHISKER PLOT FOR RANKCOL



Appendix E:

Round One Delphi Comments

Comments concerning the length of time spent at an assignment and the career progression of transportation officers.

- Officers should spend at least three years so that they don't skip out before the things they thought they "fixed" come back and bite them (which normally occurs after two years). Below-the-zones are great at job hopping every two years so they are not found out by their supervisors.

- Need to stay on the job long enough to learn it and then provide positive management leadership in it. Tough to do in less than two years time. Rotating people in and out of a job in less than 1.5 years achieves nothing for the individual or the organization--it is counter productive.

- It is important to spend long enough time on an assignment to become very proficient. Learning lead time and job complexity are keys to "how long does one stay" plus pressure factor. Two years of constantly on call, etc., are probably enough for a commander position in a busy unit. In a complex systems or integration or program management job, 4 - 5 years is probably right for continuity purposes. In no case should the 4 - 5 year maximum be exceeded more than once or twice lest there be conveyed a subtle impression of homesteading. Strike a balance tailored to job type so that general perception is one of a well-motivated, well-rounded person on the way up.

- Early in the career, more rapid movement may be appropriate to expose the young officer to as many aspects of transportation. At one location, three years in the same job should be the maximum.

- You can spend too much time in any one given career area. It is important to broaden in surface, air, commercial, and military transportation areas. In addition, being in several different commands is helpful (i.e., MAC, TAC, AFLC, SAC, USAFE, and PACAF).

- Generalization, at 01-04 pay grades, rotation of assignments in order to obtain breadth in specialty should be important; ie., a Lt should not spend 4 years as a Vehicle Ops Officer or TMO, or Veh MX, but should rotate them one or more.

- Assignment length ought to allow the officer time to learn the job (2-3 months) and time to experience the full

spectrum of activities associated with that position (ORI preparation, actual ORI, corrective action, etc.).

- Depends on what he/she does: Command or for a young officer rotate among branches (ex., 18 mos. as TMO, 18 mos. as VMO, etc.).

- Generally a three year assignment allows the officer the opportunity to learn most of the facets associated with the job.

- This spectrum of assignment length takes into account a remote tour, normal assignment and the possibility of moving from a base to headquarters or vice versa. Staying too long in one assignment, especially the 01-03 ranks, can be detrimental to career progression.

- I am a strong believer in versatility in younger officers. To the ten year point never stay more than 3 years on a job and go after an IG major command assignment. Senior captains and majors should seek out a TAF Command slot. If you do well, you're on your way and can handle any transportation assignment at any level.

- Too long on one assignment reduces the opportunity to experience some of the other transportation areas. However, if an officer can change jobs on that same assignment it is beneficial.

- Sq. Commander -- 2 years maximum. Tenure often conveys to a record reviewer the thought that anyone can be successful when this long in one job.

- The longer the time spent, the greater the depth and breadth of learning. It also means the officer will be able to produce vice only learn.

- Early on in the career progression, two years is sufficient to master field assignments in company grade. Three years max for command as field grade and MAJCOM. Senior grade need to pass to logistics.

- Our business is complicated -- need a sufficient time to develop the "depth" necessary with the new Officer Evaluation System (OES), and also the "breadth". One year tours (except Korea) are a necessary evil, but I've seen too often the 3-6-3 syndrome (3 mos getting feet on ground/6 mos relative effectiveness/3 mos FIGMO).

- We need more continuity on jobs for two reasons:
1) Officers need to be held accountable and get credit for programs they initiate or fail to change.

2) The "wheel is reinvented" much too often -- resulting in a great deal of wasted money and effort on the part of a subordinate.

Comments concerning overseas assignments and the career progression of transportation officers.

- Must demonstrate willingness to move and not be labeled a "homesteader."

- Because our career field is almost 1 to 1, CONUS and overseas, it is incumbent to "pay your dues" -- plus an overseas tour is exciting and challenging. Our AF job is deterrence -- if that fails, we need to be prepared to fight -- hopefully in the overseas theater. It is best to have been there. Professionally, I get very upset with transporters who angle their way to controlled CONUS tours to preclude overseas -- and I would like to see more "take the tour or get out."

- Overseas tours give the officer valuable insight on how the job is accomplished outside of CONUS. An officer should serve a tour in the Pacific and the European theaters.

- Everyone needs time overseas, both short and long. It adds credibility and awareness and understanding. I am leery of people who homestead in the CONUS or, conversely, spend all their time overseas.

- An officer should expect at least one and possibly two short tours. It is vitally important to career progression for an officer to work in or coordinate with the overseas warlords, USAFE and/or PACAF, or serve in Joint Commands such as EUCOM and/or PACOM. As more overseas draw down continues, this may become less important in career progression. However, the experience of Korea and Vietnam indicate we may count on overseas tours in a career.

- Can't appreciate customer and system needs unless you work all aspects.

- To be well rounded and make well founded policy decisions in senior positions, a transporter should have overseas operational and headquarters experience, preferably in a variety of commands/locations: MAC aerial port; USAFE or PACAF transportation squadron; HQ, NAF HQ, AD or ALD; etc.

- Important only in contingencies.

- Short tours need not be more than once or twice in a career, from a career progression standpoint. The overseas theaters are where we plan to conduct combat operations. Therefore, the officer needs an understanding of these arenas, either to function well in direct combat support or to support the theater from CONUS.

- If the threat is from Canada or Mexico then stay stateside, otherwise I consider an officer credible only if he/she has served overseas and experienced first hand the environment they will fight from.

- Overseas tours should be standardized with the option of a one year extension. However, to eliminate the current turmoil and uncertainty in the assignment cycle, officers on an overseas tour should have to declare their intent to extend one year in advance.

- Transportation is a global business - experience overseas is necessary to keep this in perspective.

- The short tour is not important in itself -- only to satisfy AF needs. However, an overseas (long or short) tour in the Pacific and Europe is desirable prior to the 16 year point (Lt Col). This gives the officer an appreciation for the similarities and differences between the major overseas theaters.

- Since the overseas assignments are driven by the rotation index, the "should" has little to do with how things really are.

- Must meet Air Force overseas needs. Not essential to career development -- helpful to some transportation understanding.

- How often is irrelevant. Ideally, no officer should have to serve more than one remote tour. An overseas tour is beneficial for a broader perspective, but not mandatory.

- Overseas assignments give an appreciation to transporters of their reason for existing -- to support the combat tactical forces next to the forward edge of battle.

Comments concerning the effect of assignment length on the career progression of transportation officers.

- Probably one PCA at a given location is maximum. Beyond that, the officer's breadth of experience becomes questionable -- regardless of the positions held.

- An officer should stay long enough to really learn the job. This generally entails changing jobs at the same location. If one stays too long, they become stale and less receptive to change.

- Unless you make your mark in the walls of the Pentagon, you best show success at several locations/jobs/etc.

- Unless an officer can serve in several different jobs, he/she should not stay at a base too long. Perspectives tend to get somewhat narrow if you stay at one place too long.

- Challenge brings out the best in people. It provides that stimulus to achieve. Too long in a job promotes boredom and inefficiencies.

- Must demonstrate versatility and ability to work in different command's environments. However, little professional depth is created if one moves too fast.

- Too long in one assignment does not provide career broadening.

- To broaden must experience various MAJCOMs, bases, and theaters.

Comments concerning squadron commander assignments and the career progression of transportation officers.

- Squadron Commander assignment is not important to become a Colonel.

- The true test of a person's mettle, but only one command job is required on the record. More than one is overkill and could put the individual at a disadvantage. That's too bad because our older folks need to get back to the trenches every so often to be better leaders.

- Not everyone can be a squadron commander (lots of people chasing limited number of jobs), but plum job is a mark of an up and coming person if they get it and succeed.

- Everybody should strive for command.

- It is the best measure of your ability to lead and manage people and resources. High risk - high gain.

- True test of an officer's capabilities.

- Both command and staff jobs are important in progression. Some can do both with compliments. An ideal career would move one up and down the organizational structure.

- Squadron Commander is a real plus in the career progression ladder.

- Command of a squadron is essential for proper career progression. Based on assignment history, it may come late, but it's never too late.

- No command equals no credibility at Lt Colonel level.

- Command is what that officer should be striving for. As a transporter, a squadron is about all you can hope to command.

- Especially important with today's performance report emphasis on job achievement.

- Command is highly regarded. Without it, selection for O-6 could be almost impossible. Middle major is about right.

- Only important in large squadrons with over 300 authorized.

- If one is any good, one must be a commander. Also, it's important to get promoted, and properly so.

- All transportation officers should be required to command as a senior captain or major -- it should be a requisite for any division level or higher MAJCOM job.

Comments concerning staff assignments and the career progression of transportation officers.

- Staff assignments are crucial for transportation officers to broaden and understand the total air force mission and why things don't go the way they think they should

- We attempt, within the limits of the system, to bring our very best to the staff. Tends to be a merit badge on your record. As one becomes more senior nearly all jobs are on a staff. Selection to the better senior staff jobs is based largely on a person's record of past staff jobs.

- Doesn't have high visibility (normally) of a squadron commander job or aerial port operations officer job, but extremely important to have proven, capable people on staff to continuously inject operational field point

of view into command policy decisions. Reasonable turnover of good staff keeps headquarters from getting stale/tunnel vision.

- Staff assignments are important as long as an officer does not become permanent staff.

- Helps broaden the individual's outlook related to other logistics areas and the primary mission.

- Necessary for development of larger perspective than one can achieve in the field.

- Both command and staff jobs are important in progression. Some can do both with competence. An ideal career would move one up and down the organizational structure.

- Not everyone receives the opportunity to command. Staff assignments can help enhance career opportunities. An officer should serve on two staff tours; one at a numbered AF or MAJCOM, and another at the Air Staff or Joint Command overseas.

- A well rounded transportation officer should have staff experience at NAF, MAJCOM, or Air/Joint Staff level. Again it would be better earlier, but assignment history could dictate later.

- Show versatility! Move back and forth (Wing - Command - Wing etc.).

- Provides a very different perspective from the field. Demonstrates a broader scope of operation.

- Staff assignments provide the direction to field work. A positive reputation can be fostered here. Lets face it - as one progresses in grade - assignment preferences to the higher level staff jobs is mostly through personal knowledge, or that of an associate, of the individual being considered.

- Not as important as command - but, again, individuals must demonstrate versatility. A staff job should follow two field jobs.

- One staff assignment being in transportation - then one in logistics.

- One needs to work at staff to know how process works and policy is developed.

- Unfortunately - much too much emphasis is placed on Air Staff and Joint Assignments. There are many areas where an officer's scope of job, level of responsibility and contributions are more important than "Lt Col - Action Officer - HQ USAF".

Comments concerning command identity and the career progression of transportation officers.

- Versatility is far more important than "command identity". Yes, officers will spend more time in some commands than others (MAC), but this is by virtue of where the officer requirements are. Multi-command versatility is far more important than command identity.

- To progress, one should not be associated with a specific command, i.e. a "MAC-guy". To understand AF transportation, need to see how various commands work.

- Command identity increases the opportunity for assignments as well as promotion. The transportation field is different than the rated force where a pilot or nav tends to stay in the same weapon system. Transporters have greater flexibility in changing commands. However, an officer can lose potential opportunities if he or she constantly shifts from command to command.

- This is more a mindset than a career influencing factor. The top performer will excel anywhere.

- An individual who spends more than one-third of their time in one majcom develops command identity. For some, this leads to progression and for others, it proves detrimental. My personal preference and assignment history was to serve in many MAJCOMs, Airstaff/joint and at different levels.

Comments concerning the number of MAJCOMs served and the career progression of a transportation officer.

- Demonstrating versatility is very important.

- To understand (and subsequently to make/execute) AF policy, need to see how various command's work.

- Serving in different commands provides insight and experience. A tour should be served in an overseas MAJCOM. As a large number of transporters are needed in MAC, at

least one tour should be served there. The number of MAJCOM tours needs to be tempered with the ability to obtain MAJCOM identity which enhances one's opportunity for advancement.

- This is not important to progression, but should be viewed as a placement factor.

- MAJCOMs as used in this response includes Air Staff, joint tours, and resident PME attendance.

- TAC and MAC provides better in depth experience for transportation officers.

- If the transporter is to maximize his/her value to the AF, then the officer needs experience across the spectrum of supporting the ops needs of varied commands. Only then can the officer perform at peak effectiveness in joint or Air Staff jobs.

- I believe in versatility and if you're mobile and go overseas you will automatically serve in several commands.

- We are supposed to be Air Force Transportation Officers--not MAC or TAC or SAC Transportation Officers.

- I think it is important from the standpoint of breadth of experience. I think no less than two is desirable with more contributing to a greater value of individual concerned. Certainly a career enhancement that opens more assignment doors.

- Variety in one's background opens doors at the senior level.

- The important thing is how well the officer has performed and to potential demonstrated.

- The number of commands is not nearly as important as the variety of transportation jobs held.

Comments concerning the attendance of PME courses and the career progression of transportation officers.

- They are important because the AF has deemed that they are important and we have promoted people accordingly. The most productive PME for me was SOS. That brought it all together for me as an ROTC graduate. Also taught me how to brief and write. The Air Force doesn't get their money's worth out of ACSC or AWC.

- They are important by definition. SOS probably useful for all company grades. New ACSC with emphasis on "jointness" probably useful for all field grades, especially with emphasis on joint assignment(s) being stressed as prerequisite for the most senior grades. Old ACSC today for rated types not exposed to many of the activities support officers experience en route to field grade status; not overly valuable for support officers. As ACSC viewed as "anointment for future promotion", career suicide to turn it down even if not especially practically useful.

- PME at the right time can be helpful in grasping the "Air Force" picture. Officers should strive to attend all in-residence -- if not, by other means.

- You must complete the PME courses to remain competitive.

- Should be on par with AF line average.

- With the new performance based OER system, PME is perhaps less important to career progression than previously -- however, it is one more way of developing broad perspective which, in turn, should help one perform better.

- Some is good, too much is a waste of time and money.

- Although PME is being de-emphasized at this time, it is still important to obtain this type of schooling. Career progression will still be difficult without proper PME.

- Despite the recent deglamorization of PME, its importance lies in personal and professional development for the individual officer.

- Grow with the system and learn the system because you are the system.

- Accomplishment of the PME course is important. Attendance in residence is not. An officer who will not make the effort to take the course by correspondence or seminar is not exercising enough initiative.

- Many things are taught that are not available elsewhere. Career courses also need to be stressed (we do not do a good job here). Translation - functional training is inadequate.

- Absence of PME could kill an individual for promotion. Individuals must complete appropriate PME prior to primary promotion zone consideration.

- Not necessary for transportation officers, but required for promotion.

- PME is important for all officers.

- Too much emphasis on PME instead of contribution to USAF and current job performance.

Comments concerning the attendance of PME courses in--residence versus correspondence.

- Important only because we select people to go in-residence based on their overall record. If he attended ICAF in-residence, he is in the top 10% of all Lt Col's; therefore, I want him for my top job - we perpetuate success in this manner.

- Technically, completion by either method should do the trick. Practically, attendance in-residence is viewed as a feather in ones cap/mark of an up and coming person.

- Exchange of ideas with classmates is very productive.

- In previous years either method "filled the square" with in-residence being preferred due to guest speakers and the possibility of DG. With new OER system, the in-residence course would seem to have all the advantages now - particularly since guest speakers and class interaction will enable an officer to broaden his perspective more readily than by correspondence.

- Everyone should attend SOS in-residence. The other courses can be accomplished by correspondence or preferably in seminar.

- The experience of in-residence attendance far outweighs correspondence. The interface and relationships built at PME cross service/country channels and tend to last for years.

- Accomplishment of the PME course is important. Attendance in-residence is not. an officer who will not make the effort to take the course by correspondence or seminar is not exercising enough initiative.

- There is no substitute for the value of residence courses. Career briefs have more meaning when annotated. Residence trained personnel are perceived to be smarter.

- At least in the past, attendance at in-residence ACSC and/or AWC was a real plus for promotion. Individuals were selected for PME because they ranked very high in the promotion board and subsequent promotion boards knew that.

- No difference.

- Believe attendance is good, but sometimes there are conflicts.

Comments concerning the attendance of sister-service PME courses and the career progression of transportation officers.

- I didn't do any and know few who have.

- My concern is AF and AF transportation, not what the swabbies or grunts are doing.

- Primarily a square filler. With the de-emphasis on PME, attendance should drop significantly.

- The perspective of seeing how the sister services train, operate and support their mission is second to none including joint staff assignment.

- Probably useful if one is going to a joint tour but not especially critical if planning to progress in strictly AF assignments.

- Joint services PME better switch for Transportation officers.

- It's more important from an officership perspective rather than a "60XX" perspective. The Washington community is telling us to be more joint oriented -- this applies to transporters as much as/more than other career fields.

- I can't say it does anything for the officer except enhance ones knowledge with information that may or may not be useful.

- Can become important for preparation for joint assignments.

- If accomplished at the correct point in one's career and for the right reasons. Jointness is here to stay I believe. Big question: is a sister service PME course better or worse than taking one's own PME (at same level)? Why?

- Completion of these courses by correspondence is not necessary and very few of us will get to go in-residence.

Comments concerning the attendance of PCE courses and the career progression of transportation officers.

- LOG 092 really comes too late to "help" -- and it was not designed to do so. LOG 299 can help a planner do a better job -- which helps career progression.

- Have not had the opportunity to learn about all the courses. The LOG 092 course was great.

- PCE courses are important to rounding out an officer's education and exposing him to other areas of transportation/logistics. However, there is minimum impact on the career of a transportation officer.

- If they contribute to performance -- I doubt it.

- LOG 092 provides excellent forum for senior managers. LOG 299 is excellent for application during contingency or wartime scenarios. LOG 199 and 224 serve their stated purpose. LOG 221 - can not comment on its effectiveness - familiar with the purpose, but not the results.

- If you're selected to go to LOG 092 you are already a Lt Col or Col and therefor have had a successful career. Promotion past 0-6 is not based on schools.

- Air Staff/ATC/AFIT/AFMPC have not yet finalized recommended/mandatory career education path for officers to follow that would weave above courses into career path with basic and staff transportation officer courses. We have talked about this for 2 or 3 years at TTAG; would be nice to finalize program so MAJCOMs could support.

- Transporters are logisticians and need to understand their place in the logistics world and how all that relates to operations. PCE is a good way to gain that understanding.

- Take every opportunity to learn and grow. They can help you become a better leader.

- Mixed opinion -- the corps (transporters) have not internally recognized any of these courses as the course to take. They are worth while and very good courses -- yet none of them have gained a reputation that a transporter would lie-cheat-steal-otherwise do to gain entrance. Hopefully this will change.

- All are good when timing is right and material can be applied to work.

- Performance of duty is the big factor to progression. I would encourage all officers to complete as many courses as they can to continue learning and broadening.

- A single course does not have a significant bearing.

- Should enhance.

- These courses may be important, but I am not familiar with most of them.

Comments concerning the field of study for an undergraduate degree and the career progression of transportation officers.

- There are some super senior transportation officers with science, engineering, and liberal arts degrees! However, transportation is basically business administration/management, so these degrees would help. It is interesting to speculate whether transportation units and overall AF transportation management would be better if more transporters had business/management degrees?

- While above is desirable, the right person with right attitude will do the right thing for AF transportation.

- Any advantage an individual may have with a logistics management degree is usually offset by experience in the field.

- Preferably a broad base in business management or engineering to lead into more specialized technical training in ATC as well as AFIT courses.

- Most important that this school provide a rigorous curriculum to provide basic tools, writing skills, verbal, disciplined thinking management, etc.

- The closer an officer's undergraduate degree can be related to their AF specialty the better. Tough for transporters given emphasis AF puts on science/engineering degrees for other career fields. Transportation tends to pick up a lot of cats and dogs degrees because of way accession program works. We still manage to get some good people but I believe we could do better if we didn't have to play second fiddle to some of the other career fields.

- Has no bearing on transportation career field.

- I haven't seen any discernible difference between good officers who hold various degrees. One of our best Colonels is a liberal arts major (undergraduate). The ones who hold transportation/logistics degrees are indistinguishable from the others.

- People have pursued successful careers through different backgrounds. Many factors influence this long before a decision is made for career status. It would probably be more accurate to state successful careers have come from these backgrounds--early on the information is needed.

- Not that critical.

- Certainly an advantage if one works in the area of his undergraduate specialty.

- The officer who is capable will succeed regardless of the field of study. Certain fields will just provide some advantages.

Comments concerning the pursuit of a master's degree and the career progression of transportation officers.

- Only because the air force has decided that it is important. It is rare that we get a better officer because he has completed his graduate degree. The exception would be when the individual specializes in something we can use and in a skill we did not previously have. Computer sciences comes to mind.

- It is neither important nor unimportant due to the recent de-emphasis on masters under the new OPR system. I see career related masters as a plus even if it can't be mentioned in OPR. AFIT degree especially useful; even better if it could be linked with Society of Logistics Engineers membership as consequence of graduation. Useful professionally in AF and also in second civilian career. With competitive pressure to get Masters removed, officers should spend earlier part of career gaining job experience vice extra education.

- Pursuit of a masters must not detract from job performance. In-residence (AFIT sponsored) is most desirable.

- Previously very important as both a career enhancer and a square filler. Under current OER system, no longer a square

filler but still ought to enhance one's skills and thus overall job performance.

- A master's degree is a part of the "whole person" concept which is still valid. Like PME it is being de-emphasized, but it is still important for rounding of the officer.

- Ideally an individual could complete a masters early in their career. Again depending on tour history and availability, the type of program (AFIT or civilian institution) - the earlier the better. It is important, regardless of the timing, to complete a masters to be competitive.

- The officer would not be competitive for promotion and would not progress. A master's in transportation, logistics, computer sciences would be of benefit. A masters in history might not be of much value except for promotion.

- In the past very important - today's environment less important. This can change with the Air Force leadership.

- At least it formerly was important. It will be interesting to see what happens on a new promotion system now which emphasizes daily job performance over everything else.

- Master's degree not necessary for transportation officer.

- Not withstanding current de-emphasis on PME and formal education, a non-rated officer must have a masters to compete for promotion. A master's degree should be obtained by time in primary zone for major.

Comments concerning the field of study for an graduate degree and the career progression of transportation officers.

- It filled a square.

- Presuming one enters AF with a BA from whatever U--now that a person is on active duty, he/she can be more selective.

- A graduate degree in logistics management is certainly desirable but any graduate program will enhance an officer's education.

- The primary need is for a masters degree. Preferably a program such as AFIT graduate logistics or a related field of management/business to transportation/logistics. Certainly the advantage should go to those individuals versus the students who have masters in the liberal arts or sciences.

- All the "promotion system" wants to see is the "grad" square filled.

- Probably too soon to tell on the plus or negative effects of career progression because of such a recent de-emphasis on need for getting masters. Can't see though where job related masters could not but help career progression. Combination of current theory plus solid practical experience would have to make any ambitious officer more competitive.

- When I see a masters from AFIT I take note. Where you get the degree and the field of study is important when I select an officer for my staff.

- What the degree is in is less important than the thorough processes required to acquire the masters degree.

- Not very relevant in progression (promotion); however, some fields of study would help in job performance.

- Teaches the officer to analyze and broaden his concepts in several areas.

Comments concerning the source of obtaining a master's degree and the career progression of transportation officers.

- Source is becoming very important. AFIT in-residence does the best job of providing job-specific functional training -- which should improve subsequent job performance.

- I don't look at the school, but at the major and what a person does with it.

- The source is important to the degree whether the institution provides a good quality education. Some civilian institutions are not as good as others. AFIT in--res. and AFIT CIV represent a stable quality education, however both require full time attendance and a service commitment some officers do not prefer. Non-AFIT allows for part time (night, weekends, etc.)

- Obviously, the majority will have to obtain from non-AFIT programs. They offer the greatest variety of transportation/logistics programs, but the weakness is inconsistency. Previous AFIT civilian institution programs have been the next largest source. The most difficult to attain based on the requirements and quotas are the in--residence AFIT programs.

- I think an AFIT degree is a very good one, but I marked 3-2-1 sequence because of what I perceive external biases to be -- i.e. AFIT is OK within the AF, but given the work it takes to get a masters, I suspect most people would prefer to earn one from a known civilian institution with credibility in the commercial world to enhance later job prospects.

- I personally believe there is more to gain from, say, an MBA program at a good school than an AF-tailored program at AFIT. By ranking non-AFIT last, I don't have any particular prejudice against off-duty education -- but I think you get more out of attendance in-residence, and I don't think it detracts from career progression to attend in-residence.

- Civilian institution programs are needed badly in lieu of AFIT at WPAFB. We need interface with the civil sector to gain exposure to new ideas, concepts, and ways of doing business.

- Name recognition of the institution conveys the perception of the quality of education. Some schools convey good vibes -- while others take on the look of diploma mills.

- Can be important if transportation related and comes with directed duty.

- For any given student I'm not sure I see a difference -- however I would think AFIT graduates would have directed duty in their career fields and thus progression might be enhanced.

- The source is not nearly as important as what you know.

- The in-residence AFIT program does center more on military needs and development, however does not interface with the civilian side of the industry.

Comments concerning the source of a transportation officer's commission and career progression.

- ROTC gives you the mainstream American that wants to be in the Air Force. OTS during Vietnam war were evading the draft and Army. Academy grads are brainwashed, programmed robots.

- Having a choice between two officers with equal records but different sources of commission, I would probably select the academy graduate. Therefore, right or wrong, they would have a leg up.

- ROTC and OTS represent the most practical sources. We may get academy people in field grade positions as flyers look for support jobs later in their careers and/or fill field grade jobs for which we don't have enough transporters - either through lack of sufficient initial accessions and/or prior enlisted service people punching out at 20 years because they see no real prospects for hanging around for 4 or 5 more years just to make O-4. I would not hold my breath to receive any fresh academy grads directly into our career field.

- Duty performance most critical.

- If Academy important - otherwise not terribly important.

- Academy networking/connections/recognition would appear to offer an advantage.

- It has been my experience that after 5 or 6 years in the service it is difficult to determine the source of commission without looking it up. The academies have an initial edge but generally dissipates. Prior enlisted also have an initial expertise advantage, it really depends on the individual.

- ROTC provides the greatest flexibility. Again, the degree of difficulty in the other sources tends to dictate the priorities.

- In transportation, as in other fields, productivity and success as a leader will determine your career progression!

- Source of commission is totally irrelevant except that Academy graduates "tend" to get promoted more.

- How many academy grads are in the transportation career field? Source of commission does not assure success - it does open doors for opportunity - strictly speaking for

transportation progression, it has lesser importance once a career path has been established.

- An Academy grad is part of an "inner circle", and I believe is perceived more positively by senior Air Force leadership. This positive perception should help throughout a career.

- ROTC and OTS are best because people enter the Air Force with no preconceived notions. In my experience, most academy grads expect to succeed without competing.

- ROTC gives more exposure and long term involvement than does OTS - yet still offers a more well round - "non--military" education than does the Academy.

Comments concerning the importance of being commissioned as a distinguished graduate and the career progression of a transportation officer.

- DG demonstrates the officer possesses certain positive attributes/qualities which should help him/her in their career.

- Who cares? It's what one does on the job for me that determines his/her progress.

- Being a DG can help. However, it is usually an indicator that the individual tends to excel.

- Could provide some advantage but can not see any direct relationship to transportation progression.

- Seldom is a player in the assignment or promotion.

- Being a DG establishes an initial mental picture of someone being a whiz bang performer. However, sustained superior performance on the job warms my heart a lot more. My experience with DG types suggests they're always looking for something better than being a "mundane" transporter. I'd rather have a person with their heart full time in their primary job.

- Leadership, attitude, productivity = success.

- Job performance!!!

- I have not been able to see that this makes a difference.

- Duty performance most critical.

- Good start.

- Seems to help considerably.

- Most of those guys never made colonel and were overzealous military guys that couldn't manage people.

Comments concerning being prior enlisted and career progression.

- Being prior enlisted probably hurts--many perceive they will retire early and are not really in the running for 0-5 or 0-6.

- Prior enlisted officers are initially more productive and most are good middle managers. Depending upon the length of prior service usually affects progression. The longer enlisted service, the more tendency to retire at the captain/major level.

- Some become officers, others never do and remain NCO; despite the veil of a commission.

- Depends on the professionalism and other qualities of the individual.

- Recent interface with a considerable number of company grade officers suggested that many of the prior service people had a lot more on the ball (experience wise plus motivationally) than our commissioned from college people. I know several other senior officers (transportation) that share this view. This is good from the point of view that it gives us some well seasoned company grades in our squadrons. It is dangerous, though, that too many mustangs leave us hanging with a low population base from which to select field graders because many prior enlisted people retire at 20, seeing no utility in waiting out 0-4 or 0-5 boards. Change to a 3 year vice 2 year service time after pin on is probably more a disincentive to stay on for mustangs than any benefit AF may gain from extra year.

- Prior service officers are a fact of life in transportation due to AF accession policies. My command has many. The first thing they need to do is serve in multi commands, especially if they were an enlisted transporter as opposed to other specialties. (e.g., if the officer was a 605XX aerial port NCO before commissioning, he/she shouldn't come back to MAC immediately.)

- Prior enlisted have a distinct advantage over others in grades of 2LT/1LT and junior CAPT. Beyond that it levels out. It does provide a lot of experience for junior grade officers--but not that important for progression.

- Can be beneficial if prior time is in transportation. May be detrimental as officer progresses and is "older" than rank contemporaries.

- Sometimes a leg up in developing field experience--but often a hindrance in career progression.

- Prior experience is not important but could give the young officer an advantage in experience in the military, even more so if the enlisted career field was transportation.

- Tend to always think like an NCO and not an officer; however, there are exceptions as demonstrated by Gen. Griffith.

Comments concerning age and career progression.

- Being older than average probably hurts--many perceive they will retire early and are not really in the running for 0-5 or 0-6.

- Duty execution, not age, as to what determines career progression.

- The older officers, while in the Capt/Maj rank (usually prior enlisted) have a tendency to retire or not achieve rank of Lt Col. Age per se is not a big factor.

- This has some merit, but you have to judge why one is ahead/behind his/her age group.

- It only becomes a factor when progressing in the higher ranks to Lt Col and Colonel.

- I think time in grade is more important than age, though age might become a factor for some prior enlisted service people. Demonstrated capability and diverse, well-rounded background (gained as a necessary consequence of age) are the key. As one approaches/passes the 20 year point, age becomes more important when balanced against promotion expectations as a measure of whether a person may elect to retire/stagnate/seek new and challenging jobs.

- This may be affected more from an AF-wide perspective, not transportation--i.e., if an officer is "old" for one reason

or another, it may affect his/her promotability (marginally) but shouldn't bear on career progression purely in 60XX.

- Age has little impact when associated with progression alone. However, age will flag as necessary a very thorough look at the entire record--mostly to determine if the person has achieved on-time promotions, if so, no hindrance to job availability.

- Can become a problem at extremes.

- Age has no bearing on an officer's capability.

- Other than competing with other line peers.

- Not too much of a factor.

- Age should have no bearing.

- Older officers will have trouble getting promoted if their appearance (gray hair, wrinkles) is evident in their promotion picture.

Comments concerning the holding of an operational rating and the career progression of transportation officers.

- Being rated may help an individual get a commander position--but non-rated officers are not denied the opportunity. This entire area is very dynamic now as large numbers of pilots leave the service.

- If a rated officer comes in the transportation field and stays or comes in and then back to OPS then TRANS again, he obtains a valuable perspective most transportation officers don't have the opportunity to see. Most rated officer's have come through several screening processes and have a tendency to be a cut above. Navigators generally have an opportunity to stay in the career field, but pilots usually get called back to fly.

- The question here is capability to do LGT/TR type work. How need experience coupled with what level of performance, irrespective of aeronautical rating.

- Operational or other ratings is not and should not be a factor in transportation officer career progression.

- We have come a long way in 30 years. When I started, a non-rated officer was at the bottom of the social and

professional ladder. Today, I don't believe there is a single senior transporter that is rated.

- Important in that the career field does not generate internally enough field grade officers to fill all of its field grade authorizations. Rated people for the most part don't impede career progression of non-rated transporters as we don't grow enough to fill all 0-4 & 0-5 billets anyhow. However, there are usually enough qualified non-rated career 0-6's such that the one 0-7 Hq USAF job out to be filled by one of them. Realize this is a flying AF but filling the job with a rated person sends a message to every aspiring officer in the career field--"why bust my ass when I'm cut off from the top job because I don't have wings."

- The officer's career progression as a transporter will be interrupted by flying assignments. Flying assignments will be disrupted by transportation jobs. Usually what happens is that the rated officer loses credibility (for flying SQ/CC, etc.) in the OPS arena and ends up a full-time transporter. They're typically enthusiastic and top quality transporters. No wonder "career transporters" are concerned about them...they do good work for me, and I support them for promotion, etc. Results are what count!

- Tough question. If you have confidence as an operator it can help you in logistics. Example, as a master parachutist I had a lot of credibility with the Army when I held a joint assignment--they trust you because you jump with them. Army Generals gave my career a big boost.

- It has gained many officers a command position that they otherwise would not have received or been unqualified for -- simply because of being a "favorite son."

- Pilots still rule the roost and receive the bulk of promotions. Historically navigators have fared worse than non-rated. I view OPS as a career enhancement into an operational field that tells the world I can do different things and be successful.

- Rated may have disadvantage because "lost" time doing rated duties.

- Not important to support careers.

- Having a rating, per se, is not the key. What's important is the breadth of experience brought to bear on one's current transportation job. In this respect, having experience in another related field (such as pilot or navigator--or maint) is beneficial.

- It balances out. Rated officers tend to get promoted faster than non-rated. Fliers could pick up valuable experience if they flew airlift. However, they lose valuable time and experience in the career field. Missile officers or other ratings would probably have no advantage in background.

- Ten year pilots/navigators out of the AFIT sponsored masters program are excellent resources and we should keep them past their three year commitment.

Comments on the length of time a transportation officer holds a particular rank.

- It is a function of passovers. There is a stigma attached to passed over officers (unfortunately) and their assignment choices become limited. There is a lot of talent out there with a passed over label.

- The informal as well as formal system starts to work if an officer has held a given grade fro too long - usually as a result of one or more passovers. The official presumption is that a passed over officer is still a valuable asset (especially O-5's). Practically these officers may be shot out of jobs seen as promotable positions for up and comers.

- Obviously, the less the better. Also obvious, any passovers are detrimental.

- Once you get one passover your career progression is limited. If you are promoted APZ your potential is sound and restored.

- Line average.

- Only important if too long -- and then it has probably already been indicated by a passover.

- The biggest factor is the promotion year group and if the officer gets promoted on time. The length of time is not much of a factor.

- Obviously is a person is promoted below the zone it will vary the years. Specifically, rank should be made on time based on the average promotion cycle. Any BTZ promotions should lead to earlier rank in the other zones. considering the number of transportation general officers in the Air Force, career progression after colonel is limited.

- On time promotion or you are a marked person. It is the way the Air Force currently does business.

- If an officer gets promoted on time or early he or she is doing OK. Non-selectees have a hard time getting into good promotable jobs. Lt Cols and Colonels can be effective, although not promotable, for several years at those ranks. Captains and majors must be promoted on time. Some people will get promoted late but it takes a lot of support.

- Perception has the most influence on this factor and current perception holds beyond first promotion consideration it is down hill. Change will occur only when senior officers de-emphasize promotion as a measure of success.

- Obviously, if an officer holds it longer than normal career progression allows, it is tremendously important (i.e., the officer is passed over!)

- We need to get rid of the stigma of non-promotion! Too many qualified officers are locked out of important jobs or turned down by certain commands because they have been passed over for promotion.

Comments concerning the number of awards and decorations and the career progression of transportation officers.

- Important because if the officer is not receiving awards, he or she is probably not performing at an acceptable level.

- Very subjective area. Some folks haven't had one opportunity others have had, but that shouldn't preclude them for competing for good jobs, whether Capt or Colonel.

- Most awards have become commonplace and usually are given as an end of tour reward: Capt--comm medal; Maj & Lt Col--MSM, etc.

- Should not be a factor in career progression. Dependent on the level and type of duty assignment.

- Important, not so much for the award per se but more as a mark of demonstrated ability/anticipated potential. For example, I'd probably subconsciously wonder about a senior captain or a major that didn't have at least one AFCM--especially since the AF is relatively free with the award of decorations.

- Awards have no meaning other than combat related. Everyone gets CMS for doing an average job.

- Do your job and the rewards will come; maybe not when you expected them but life has a way of balancing and identifying those who deserve recognition.

- This should not be relevant at all.

- Awards are important for personal recognition but I have never known them to influence progression.

- Important in that they demonstrate the officer has been around and recognized.

- Number is affected a lot by how often the officer changes jobs. Current rules hold us in place longer and will reduce the opportunity.

- Demonstrates breadth of assignments and performance especially if he has more than the customary end of tour awards. I am somewhat prejudice as I have 19 medals and ribbons in 22 years and I worked by butt off for all of them.

Comments concerning the region from which a transportation officer comes from and the career progression of transportation officers.

- I've known good and bad officers from all areas.

- Officer's who come from states with low primary and secondary educational levels have a tendency to be a little slow. However, there is always an exception to the rule. A good college education on initiative of the officer can overcome a lot.

- I suspect the quality of the college/overall education system from which a person comes is more important than region per se. I rated the south low as many of the officers in particular, have been pretty deficient in math, language, and writing skills. They were sharp and highly motivated people, but peaked out early on the power curve when it came to the administrative/executive requirements of being an officer.

- There are some statistics that indicate retention is slightly better from certain areas of the U.S. but not quality.

- Air Staff and JCS -- too many people go to those jobs, strictly for promotion although they hate the job and the area.

- I just have no thoughts on this and have not ever considered one part of the country producing better transportation officers. If the work ethic is considered-- it is not secret the interior of the U.S. is better than the coastal regions. I would not even attempt to quantify this.

- Midwestern officers are logical, hardworking, and great briefers.

Comments concerning the marital status of transportation officers and their career progression.

- Today's AF is married/family oriented. Unmarried personnel will not "fit in" as married people will--single is an exception, not the rule. Overall perception of a single officer (especially above captain) will not be as positive as a married officer.

- The major impediment is when an officer is married to an enlisted individual. Joint spouse consideration and senior officer resistance may not enhance career opportunities. Generally it helps if a SQ CDR is married but not totally necessary.

- Depends on the individual. Certainly some advantages to being married in positions such as squadron commander, wing staff, MAJCOM director, but some individuals function equally as well as single or separated/divorced.

- I made it to O-6 as a bachelor. So much for the "essential contribution" of the spouse.

- Can impose difficulties if two officers are married and working joint spouse assignments or if there are officer/enlisted marriages (officially frowned upon but several exist). Latter case particularly sticky as officers move up in rank. Require case by case exceptional handling. Spouses with their own careers can also be a problem. I don't think any of these situations actually impede career progression (though enlisted spouse could) but they do add another often significant obstacle which must be overcome. Rumor also has it that one must be married to be considered for the HQ USAF/LGT position. While having a spouse in this position may be useful for the social functions that a senior officer must attend, I really don't see a practical

need for this requirement (assuming rumor may be true). People shouldn't be limited in promotion potential because of marital status.

- Discouraged by policy.

- No factor. Moral character does influence.

- Only becomes a factor as officer gets into field grade ranks.

- Shouldn't be. However, it would be interesting to see what % of field grade officers are unmarried--and what % of squadron commanders are unmarried.

- Irrelevant at lower ranks. The only difference it makes later is that some commanders or wing commanders still want married squadron commanders.

- Marital status becomes important at the senior officer level and unfortunately I feel it has an impact in a General Officer sponsoring you throughout your career if they feel your wife is a support to your career.

Comments on other variables, such as; gender, number of dependents, and/or religious preference, that should be a considered when considering the career progression of a transportation officer.

- Gender, neither important nor unimportant. Number of dependents--six or more may be perceived as the individual is more interested in family than service. Religion--belonging to a "fringe"/extreme group may not be perceived well and could hurt career progression. AF tends to be conservative, middle-of-the-road. Belonging to something on either side may hurt. Note: a lot depends on local leadership.

- My concerns are attitude, job expertise, commitment to unit and AF mission and performance.

- Female transportation officers generally do not fare as well as their male counterparts. This is also true in the civilian world. A lot of it has to do with spouses, moving, children, etc.

- I don't feel that any of these variables are important (e.g. we have female squadron commanders, MAJCOM/SOA directors, Air Staff/Joint Staff transportation officers.

- Religious preferences shouldn't matter except as pertains to assignment to a country with expressed hostility to a specific faith (ex: probably not a good idea to send a Jewish person to Saudi Arabia). Same thinking would apply to gender in some cases. No problem with number of dependents unless their demands on an officer's time adversely impact that available for duty. I think culture is a more important consideration for achieving good career progression. We draw our officers from many subcultures in America. Some subcultures tend to produce much more achievement oriented/leadership oriented people than others. Religious philosophy and economic aspirations are important as are prejudices of surrounding dominant cultures which may condition self-image/expectations/aspirations of people in the subculture(s). My experience has been that officers from largely non-dominant subcultures have not been generally as vigorous in acquiring the education and developing habits of leadership necessary for successful long term career progression. I realize say this borders on stereotyping but I know there have been enough scientifically conducted studies to show that these syndromes exist. The task of the AF in recruiting officers from the many subcultures existing in America is to seek the stand out candidates who have overcome cultural restraints in order to demonstrate the qualities for which the AF is looking: facility of expression, sound basic math skills, and a generally active attitude toward leadership. I know the AF does this now with select candidates chosen for the Academy, but support career fields rarely receive these people after graduation. It would be desirable to do this for the support careers also.

- These items are unimportant when compared to duty performance; however, they can become important if they interfere with duty.

- Not at all germane. "Performance" on the job ought to determine progression. Present OPR system is a great step in that direction.

- None of this "should" make a difference.

- Male versus female should not be a factor in promotion. Quotas for females that ensure they are promoted only result in mediocrity in our higher grades. Performance should be the driving factor along with intelligence and educational achievements should be heavy players. Females should not be assigned to positions that place them in abnormal danger of getting captures. Religious preference should not be a player, however, they should have basic moral values and ethics so they don't sell themselves.

Appendix F:

Round Two Descriptive Statistics

Statistics on the estimate for how often a transportation officer should have an overseas short assignment.

DESCRIPTIVE STATISTICS

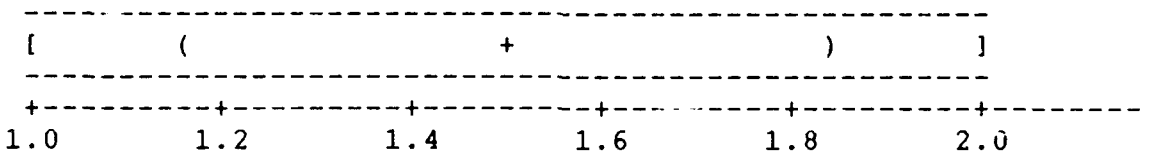
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
OSSHORT	1.500	5.000E-01	21	1.500	1.000	2.000

FREQUENCY DISTRIBUTION OF OSSHORT

VALUE	N	
1	11	|**********
2	10	|**********

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR OSSHORT



Statistics on the estimate for how often a transportation officer should have an overseas long assignment.

DESCRIPTIVE STATISTICS

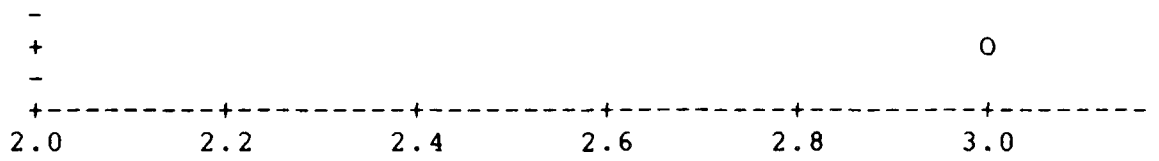
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
OSLONG	2.143	3.586E-01	21	2.000	2.000	3.000

FREQUENCY DISTRIBUTION OF OSLONG

VALUE	N	
2	18	|******************
3	3	|***

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR OSLONG



Statistics on the importance of the source of a master's degree in determining the career progression of a transportation officer.

DESCRIPTIVE STATISTICS

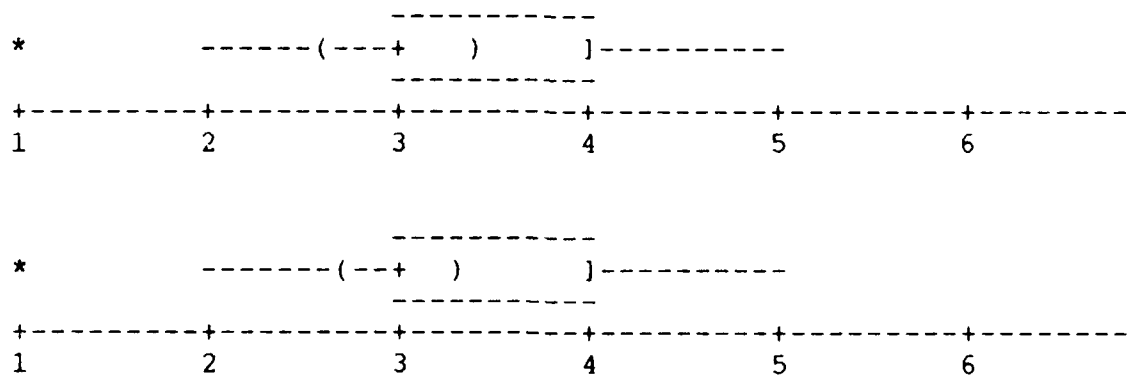
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
DEGSOURCE	3.190	9.284E-01	21	3.000	1.000	5.000

FREQUENCY DISTRIBUTION OF DEGSOURCE

VALUE	N	
1	1	|*
2	3	|***
3	9	|*********
4	7	|*******
5	1	|*

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR DEGSOURCE



Statistics on how important the Senior Transportation Executive Development Program currently is when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

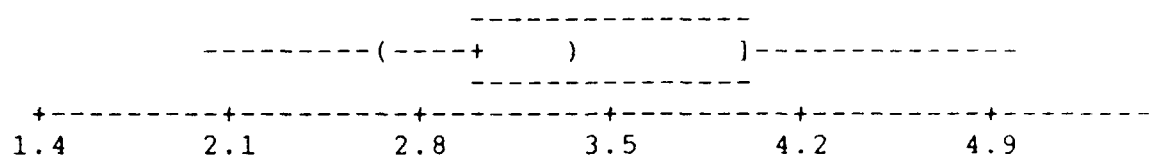
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L092NOW	3.425	8.156E-01	20	3.000	2.000	5.000

FREQUENCY DISTRIBUTION OF L092NOW

VALUE	N	
2	2	|**
3	10	|**********
4	6	|******
5	2	|**

NON-MISSING	20
MISSING	3
TOTAL	23

WHISKER PLOT FOR L092NOW



Statistics on how important the Senior Transportation Executive Development Program should be when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

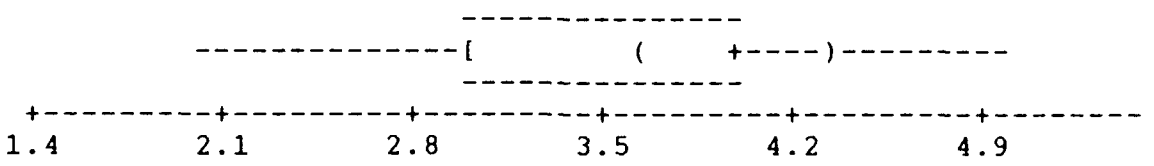
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L092SHLD	3.625	8.091E-01	20	4.000	2.000	5.000

FREQUENCY DISTRIBUTION OF L092SHLD

VALUE	N	
2	2	|**
3	6	|******
4	10	|**********
5	2	|**

NON-MISSING	20
MISSING	3
TOTAL	23

WHISKER PLOT FOR L092SHLD



Statistics on how important the Introduction to Logistics Course currently is when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

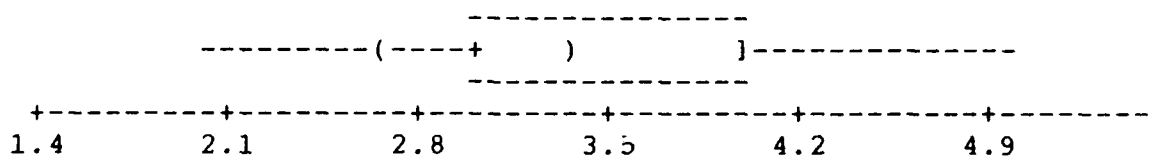
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L199NOW	3.095	8.309E-01	21	3.000	2.000	5.000

FREQUENCY DISTRIBUTION OF L199NOW

VALUE	N	
2	5	|*****
3	10	|**********
4	5	|*****
5	1	|*

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR L199NOW



Statistics on how important the Introduction to Logistics Course should be when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

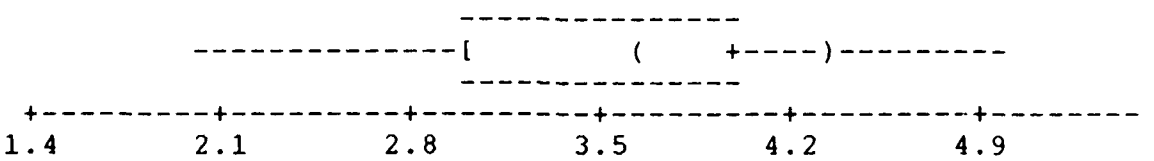
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L199SHLD	3.524	6.796E-01	21	4.000	2.000	5.000

FREQUENCY DISTRIBUTION OF L199SHLD

VALUE	N	
2	1	|*
3	9	|*********
4	10	|**********
5	1	|*

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR L199SHLD



Statistics on how important the Logistics Managers and Computer Simulation Course currently is when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L221NOW	2.762	6.249E-01	21	3.000	2.000	4.000

FREQUENCY DISTRIBUTION OF L221NOW

VALUE	N	
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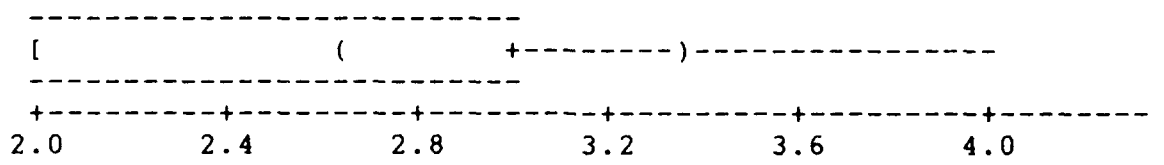
3	12	|************
4	2	|**

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR L221NOW



Statistics on how important the Logistics Managers and Computer Simulation Course should be when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

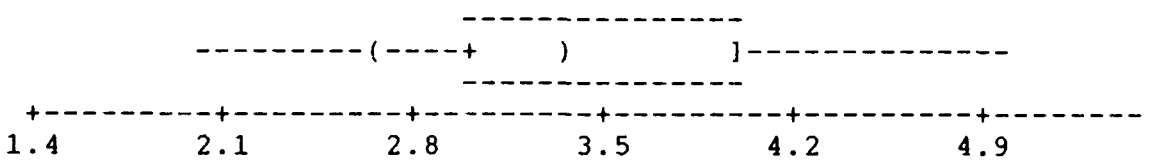
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L221SHLD	3.238	7.003E-01	21	3.000	2.000	5.000

FREQUENCY DISTRIBUTION OF L221SHLD

VALUE	N	
2	2	|**
3	13	|**********
4	5	|*****
5	1	|*

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR L221SHLD



Statistics on how important the Logistics Management Course currently is when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

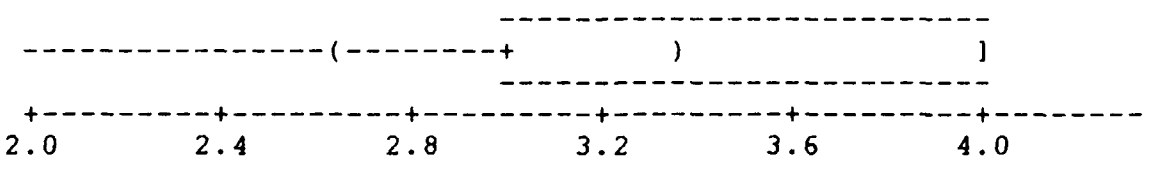
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L224NOW	3.095	7.003E-01	21	3.000	2.000	4.000

FREQUENCY DISTRIBUTION OF L224NOW

VALUE	N	
2	4	|****
3	11	|**********
4	6	|******

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR L224NOW



Statistics on how important the Logistics Management Course should be when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

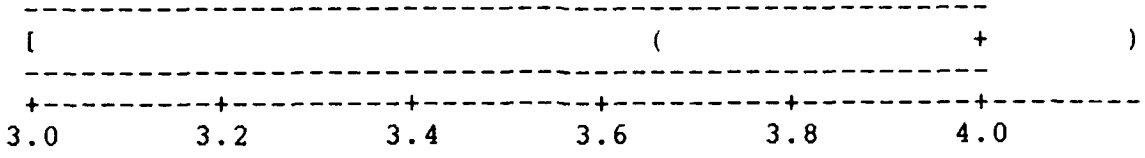
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L224SHLD	3.619	4.976E-01	21	4.000	3.000	4.000

FREQUENCY DISTRIBUTION OF L224SHLD

VALUE	N	
3	8	|********
4	13	|*************

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR L224SHLD



Statistics on how important the Combat Logistics Course currently is when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L299NOW	3.238	9.437E-01	21	3.000	2.000	5.000

FREQUENCY DISTRIBUTION OF L299NOW

VALUE	N	
2	5	|*****
3	8	|********
4	6	|******
5	2	|**

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR L299NOW

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---------(----+     )         ]--------------
                      ---------------
 +---------+---------+---------+---------+---------+---------+--------
1.4       2.1       2.8       3.5       4.2       4.9
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Statistics on how important the Combat Logistics Course should be when considering the career progression of transportation officers.

DESCRIPTIVE STATISTICS

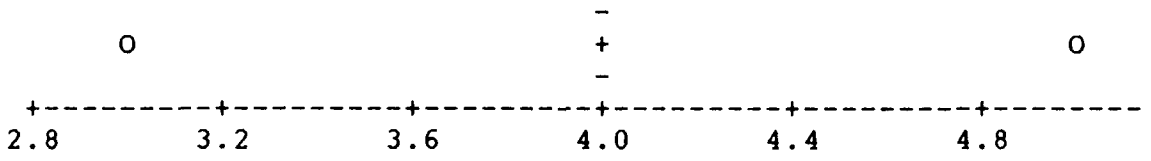
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
L299SHLD	4.000	6.325E-01	21	4.000	3.000	5.000

FREQUENCY DISTRIBUTION OF L299SHLD

VALUE	N	
3	4	|****
4	13	|**********
5	4	|****

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR L299SHLD



Statistics on how important the Graduate Transportation Management (GTM) program currently is when considering the job performance of transportation officers.

DESCRIPTIVE STATISTICS

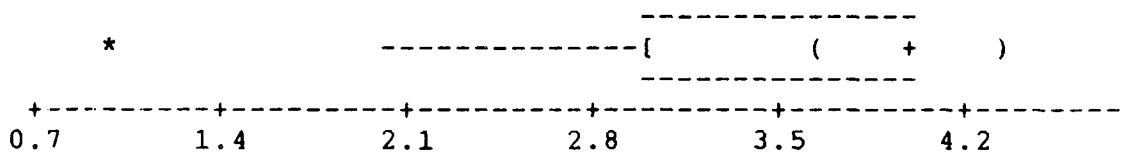
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
GTMNOW	3.286	9.024E-01	21	4.000	1.000	4.000

FREQUENCY DISTRIBUTION OF GTMNOW

VALUE	N	
1	1	|*
2	3	|***
3	6	|******
4	11	|**********

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR GTMNOW



Statistics on how important the Graduate Transportation Management (GTM) program should be when considering the job performance of transportation officers.

DESCRIPTIVE STATISTICS

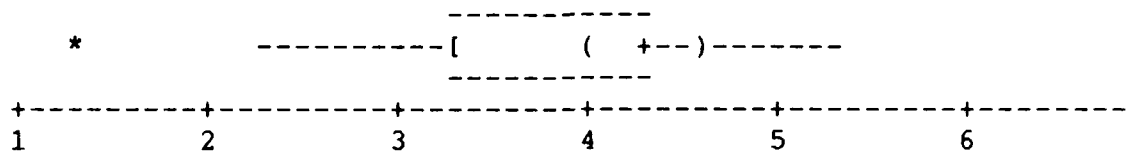
VARIABLE	MEAN	S.D.	N	MEDIAN	MINIMUM	MAXIMUM
GTMSHLD	3.429	0.978	21	4.000	1.000	5.000

FREQUENCY DISTRIBUTION OF GTMSHLD

VALUE	N	
1	1	|*
2	3	|***
3	4	|****
4	12	|************
5	1	|*

NON-MISSING	21
MISSING	2
TOTAL	23

WHISKER PLOT FOR GTMSHLD



Appendix G:

Round Two Delphi Comments

Views concerning overseas assignments and the career progression of transportation officers.

- I don't really agree with this. Circumstances/locations vary. Agree that there should be options to extend, but believe that's the way it now is. The present DEROS system seems fair to everyone.

- Some senior officers are allowed to remain stateside at the expense of others. Some are protected ('72 overseas return date) while others are forced to go again. Junior officers see this and is a factor in career decisions.

- Obviously, if there is a contingency or war such as Vietnam, the number of short tours could exceed two. It is still important for an officer to serve overseas in long tours to broaden total perspective and understand interface and interaction with foreign nations and local national work forces.

- Knowledge of various country's employment strategies and unique logistics systems applies to career broadening. Experience gained in multiple transfers is beneficial.

- Overseas tours should only be extended if the extension is accomplished nine months in advance. Short notice extension requests by members stationed overseas creates turmoil in the assignment process.

- Peace and wartime situations may drive variances. However, the 2 x 2 recommendation can provide good balance.

- It's not that officers "should have" overseas tours, it's a reality in career progression. You should plan ahead to look for more responsible jobs then you have now.

- Wartime requirements are overseas. We have to know what will be essential there and work in that situation.

- My answer is an average cover--some will have more, some fewer--and all must recognize other Air Force needs may take priority for some officers.

Comments on the factors that influence the selection of the source of a master's degree.

- I cannot agree with those who say we must "interface" with the civilian side of the industry--a civilian institution doesn't really expose the students to "real ways of doing business", I know, I went through one. The source is important--only a good source can provide the education which enhances performance.

- It's what a person does with his/her education, not where he/she got it. I look for production under pressure, not paper on the wall.

- What you do with your degree is more important than the source. Civilian interface is an important facet of education. Too often we are locked into the same mold of thinking. There should be an optimum mix of military and civilian thinking.

- Relevance of the degree, regardless of source, is the key--something which is useful and relates to transportation management.

- Key to the degree is its type (preferably in transportation management, logistics, management, or MBA/MPA) and the timing for its completion.

- Availability of officer to attend when the AF wants him and his present job assignment.

- Source of degree vis-a-vis determining career progression may be the hang-up. I think source of degree (e.g., civilian university MBA) makes a better program but doesn't particularly determine career progression . . . too many other factors predominate in career progression (e.g., timing, assignment availability, etc.).

- It's needed to fill the square, therefore it's important. Realistically, applicability is only as good as the assignment process can utilize those skills attained at school during the ensuing 2 - 4 years.

- Master programs that best serve AF needs can be better provided through AFIT resident schools. Civilian institutions most certainly enhance ones career objectives subsequent to departing the AF.

- Availability of the program to the officer at the time he needs it.

- It is important that the advanced degree relates to your job, i.e., management, transportation--NOT counseling.

- Over the past 35 years I have seen officers with masters degrees fail and ones without excel. It all depends on the individual and how he/she applies him/herself.

- I have been a member of at least 10 promotion boards--the only concern about source I have noted among board members was when the degree was from a known diploma mill.

- The degree and major are important. An MBA in transportation is of more relevance that an MS in psychology. A masters in human relations from Webster does not seem as reliable as many other degrees from schools not perceived as diploma factories.

- Application of education is more important than source. An individual who obtains a degree on his own and in an area of interest is more likely to get more from it.

- The school's record of credibility in the commercial and academic world.

- In-residence programs (AFIT or AFIT sponsored) are more credible.

Comments on views concerning the LOG 092 course and the career progression of transportation officers.

- This is the most valuable and important PCE course.

- Super course. Only problem regarding career progression is you have to be a LTC/Col to go. Career and reputation already pretty well set.

- This course offers the opportunity for exposure to other portions of logistics/transportation. A very good course.

- All senior transporters should attend this course. This course provides a review/refresher to the important and key issues going on in the DOD, Air Force, and "state of the art" commercial industry systems and strategies.

- This course is out of context with your question. You must be an 0-6 to attend. Attendees are already at the top of promotion ladder.

- Senior transportation officers in place (duty assigned) should have an understanding of and be applying these

criteria. Management decisions for DOD transportation is driven by progress, we implement what is given, not what we know to do the best solution.

- This is an executive development course. . . background not qualifying a person for executive position.

- One of the best I've attended--short--applicable information (mostly) and good interface with other senior transporters.

- It is a good course; however, it has not gained a reputation as the course to attend for career advancement nor will it probably ever. The duration works against it and historically, no school has ever been promoted in transportation as being above highly desirable. A rather ho hum attitude about the current courses translates to same attitude for career importance.

- When I went, it was a great social event but did little for a professional transporter.

- It is a good informative course but has no effect on an officer's career progression.

- Should continue to be LTC and GM-13 and above.

- Pretty much for "senior executives," isn't it? They've probably already progressed in their careers--before they had this course.

- Not important whether officer had it or not but officer should want to get it.

- Should help the senior transportation managers "tie it together."

- Importance varies with rank. Importance for an 06 is nil as the chance of a transporter 06 making 07 is nil. More important for aspiring 05's or upwardly mobile GM14/15's, particularly should AFIF ever be successful in getting need to complete course included in career progression plans.

- Don't penalize an officer who does not have the opportunity to attend.

Comments on the views concerning the LOG 199 course and the career progression of transportation officers.

- Don't know anyone who attended. I didn't--and still made 0-6.

- Transporters need the broad loggie view. This course would seem to give it to them.

- There is a major gap between a logistics officer and an AF transportation officer. The other services have a smaller problem than the AF. All transportation officers should be exposed to this course.

- This is a basic introductory course for "loggies" that probably should be mandatory for transporters.

- Transportation is only one part of the logistics system.

- We need to educate our officers on where they fit, and what other loggies do.

- A desirable but unimportant course unless one wants to get into log plans later.

- Probably better than the 092 course.

- This is an area we need to stress to our young officers--a broader view of transportation as one of the logistics areas.

- Could be beneficial to new loggies but I don't know of any who've been.

- If a transporter has a variety of jobs and has been paying attention, he/she will have learned more practical application than this course will give.

- Good "context of logistics" course for company grade officers; new field grades. Balance this against ATC Staff Transportation Course, where we're getting increasing number of enlisted mixed with company grade officers (and almost no field graders--believe we used to aim at senior captains/majors/lt. colonels). Changing complexion might suggest beefing up AFIT course(s) and deleting/making senior NCO the ATC course.

Comments on the views concerning the LOG 221 course and the career progression of transportation officers.

- Don't know anyone who has attended--can't be that important. Couldn't even find the word transportation in the description.

- This seems a "nice to have" background. In the practical world, I look for effectiveness. If a subordinate needs to get smarter in computers, I expect him/her to get it.

- This appears to be semi specialized and probably only applies to a certain group of officers.

- We as transporters (junior and senior) need to be familiar with updated "state of the art" computer systems/programs and decision making techniques.

- Importance is relative. If the officer is in the wholesale community, airstaff, joint, or MAJCOM, then yes; if at base level, no.

- We need to have middle and senior managers more atuned to the assistance which computer simulation can provide in dealing with many of today's management problems.

- Great course if you are going PCS to the AFCMC!!

- Course sounds good for people to some jobs but I don't see where it should have any great bearing on career progression.

- Computer literary is important and simulations are an economical way to make trial and error decisions.

- Get our 1st Lieutenants/Captains to this. Wave of the future.

Comments on the views concerning the LOG 224 course and the career progression of transportation officers.

- Don't know anyone who attended. I didn't and still made 0-6. I don't even know how to apply for any of these--and didn't know as a junior officer.

- Another nice to have. Could be a tie breaker in hiring a transporter.

- Most transportation officers are functionally exposed to transportation versus logistics. This course should be offered to mid managers, i.e., majors, etc.

- Excellent course that explains the interfaces/ interrelationships of logistics functions. Good "hands on" experience obtained from exercises, case studies, etc.

- Probably known by the wholesale community only--and probably not transporters.

- This one sounds like it would be worthwhile for all officers at some point.

- Assists in giving a "big picture" perspective to any logistician.

- Great for 04's/selected 05's, especially if going outside traditional AF transportation jobs (aerial ports/ transportation squadrons) into areas like AFLC or DLA.

Comments on the views concerning the LOG 299 course and the career progression of transportation officers.

- Have heard this is a good course--but I send my planners to the AU planning course at Maxwell. Haven't heard much about LOG 299 recently--certainly haven't seen any quotas.

- This would be especially useful prior to overseas assignments.

- I'm not sure if this isn't a duplication of some of the courses taught at Armed Forces Staff College. A good course to expose majors and lieutenant colonels to.

- For those who have not had the opportunity to be involved in or provide support for a war or contingency, this course should be a must!

- We have little schooling in this area and, probably, few do self-initiated outside reading.

- No first hand experience with this course--but from the course description I have little confidence in the ability of AFIT or any other agency to keep this type of curricula current and valid. I have even greater reservation about the feasibility or relating the course to most folks' current job.

- I have not attended, but those from the office and field have had nothing but praise for this course! It obviously filled a need and therefore is of greater importance.

- Good course to remind us what it's all about.

- This course should be mandatory for all logistic specialties.

- Could be of value to most officers at some point.

- Winning the war is the ultimate goal! Any experience gained before the war will be of great help.

- Again, feed the 1st Lieutenants/Captains/selected Majors. We generally need to get on with what we've discussed at TTAG for last three years and get in bed with ATC and MAJCOMs to build these courses into officer career progression plan. We've been dawdling!

Comments on whether or not the AF Form 1715, Officer Brief, provides historical data reflective of the job performance of a transportation officer.

- Doesn't reflect performance--only that he or she performed a particular job.

- Not really. It lists past assignments and inflated OER data but you almost need to speak to someone who knows them to get a feel. A positive reputation is crucial to hiring people. Educational data does, however, reflect initiative.

- Usually provide a RIP or CERF--maybe MAJCOM unique. Normally use this type form as an initial review step. Followed with more detailed information.

- Not enough information to evaluate/review actual job performance.

- It provides general information. It would be difficult to include job responsibilities, scope, number of people supervised, etc., in everyones officer brief.

- Everything but job performance.

- No, the career brief is an inadequate tool bordering on the unsatisfactory. An OER/OPR file attached only then makes it marginally useful. I hire based on a phone call to current or past supervisors of the individual.

- Very little, reflects position assignments and OER ratings, very little concerning scope, depth, or magnitude of problems solved/encountered/walked away from.

- Only the summary OER data--the prospective boss who's considering the officer for assignment needs to know who the officer worked for and investigate.

- Not enough. I believe a one-two line (no more) description of each job would be helpful--especially to a promotion board.

- It does provide some indication of experience and levels. Therefore a good screening sheet but decisions made solely with this document only can be very erratic when compared to the desired outcome. With inflated OERs, the number rankings are virtually the same. Only a good look at the entire record can bring some assurance of a correct decision.

- No, everyone gets a good rating. To find out if the guy or gal is any good requires personal contact with their bosses.

- Yes if actual and realistic job title is used.

- Only in a track record of assignments that grow in importance and the OER record that is below firewall.

- As I recall, it lists positions held and overall OER ratings. With inflation in OER's, not really enough to provide insight.

- I'm not sure what this form is but if it is the computer printout and given OER ratings it does not do a good job of describing performance.

- No. It shows the type or title of jobs, but only the OER/OPR tells what the job really is and how well it was done.

- If this is the same as the computerized brief I get from MPC, yes. I also use a computerized Assignment Processing SURF I get from my MAJCOM DP shop. The Duty History/Duty Title information I get from these and OER data is useful in assessing background/duty potential in deciding if I want to "hire" an officer. Ditto for job educational background.

- It only provides a concise assignment history and will indicate if there were problems. Otherwise, you have to assume all was well.

Comments on other sources used when determining the job performance of transportation officers.

- OERs/OPRs. OERs, reading from the bottom up, i.e., level of endorsement and grade of final endorser. New OPR will give a better indication--but eliminates the "discriminator" of the level of endorsement.

- Personal calls to and commitment from a supervisor or senior transporter I know. Grapevine--who knows them.

- Official record folder to include all OERs plus new OES. Discussion with other officers who know the individual.

- Officer Performance Reports.

- Training reports, letters of evaluation, OER/OPRs, previous supervisors, review of thesis/research papers for graduates of AFIT/other masters programs.

- There is little available besides OER. I usually try to contact previous supervisors to get an honest appraisal.

- Ask lots of questions of the former bosses or current supervisor. The AF 1715 is virtually useless.

- Call previous commander/rater and discuss these factors.

- OERs, word of mouth, level of job ("repeats" or singular track vs. progressive responsibility, multiple MAJCOMs, overseas, etc. from the brief).

- Review of performance reports and if selecting for assignment, personal calls to former bosses.

- OER, OER, OER

- Depending upon the job to be filled. Mostly word of mouth about the capabilities of the person considered/recommend by personnel system. Past OERs were so inflated--nothing of much meaning could be learned and the personnel briefs don't help much either.

- OERs. Personal references by both supervisors and peers.

- Performance report and former/current supervisor.

- OERs. Recommendation of others I know and trust.

- Discuss performance with others who may have supervised the officer(s). Review personnel record and OER's (if available).

- Words in OER and opinions of people who have worked with him.

- Performance reports, awards, and decorations.

- OER/OPR and variety of jobs--especially key are the job descriptions.

- Calling a colleague or the officer's superior to verify they're a top performer as suggested by OPR; direct interview of officer with previous concurrence of his/her superior, unit's track record as per IG, or similar reports.

- OER and OPR's and word of mouth (reputation).

Views on historical method of measuring the job performance of a transportation officer.

- I think an OER had more than "limited value." I do not agree "OERs are of limited value." Other than speaking to a previous supervisor, I don't know of any other way to measure job performance.

- As noted, call someone. As an instance, if someone has been at a MAJCOM base and then assigned to that MAJCOM, would indicate good performance.

- The old OERs provide a much better indicator than the new OES. The front portion of the OER (knowledge, judgment, leadership, speaking and writing) were the key elements. The level of endorsement carried weight on the back. I can generally interpret an OER in spite of the inflation.

- I disagree they are of limited value--on the contrary, there really is no other way other than word of mouth, for which there is no audit trail and is valid only so long as current people are still around.

- The old OER system was of limited value. With the new OPR system it could change and be of more value. The main historical method has to be a compilation of various sources as answered in the previous question.

- True--what is a historical method? If you mean a historical record of job performance, I know of none. Usually it is possible to extrapolate an answer from the job history. Good officers gravitate to the better jobs.

- We need to build a tool in career development program that measures job performance on "value" basis. A top person

doing well in an easy job versus a top person in a tough job (SQ/CC) needs to be addressed.

- Don't know, personnel folks should, they are the experts.

- Under the old system, level of job and level of endorsement and who was in the chain.

- Limited value is at least something! Over time they provide a roadmap of a career. You can contact some reporting/endorsing officers and discuss the officers.

- If rating officials exercise integrity when completing the OER, they are of immense value in measuring job performance.

- First hand knowledge is best. Second is someone else who knows the individual and third would be the OERs. While limited in value as to undesirable traits, they do provide some subtleties that a careful reader can draw some conclusions about performance. I know of no other method for determining.

- Word of mouth.

- I disagree. If you read most OERs you get a feel for an officer's past performance. But again, no one in the AF or out would fill a key position without checking with prior supervisors.

- If OER is crue and raters give good data. If not, still need personal view of supervisor.

- I do not agree that OERs are of limited value.

- Other than word of mouth, don't know of any.

- OER ratings are of little value because we all walk on water. However, subtleties in the words can give some indication as well as endorsement level in some cases. No historical method I know of.

- Reputation within the transportation community.

- OERs may be of limited value when considering inflation of the past. However, assuming all OERs were inflated they are still the best source available to measure performance.

- Yes. OPR system may help change this. Promotion recommendation form would probably be more useful if it were accessible. The most common historical method is looking at the list of the officer's previous assignments and telephoning trusted acquaintances to see if the person

matches the OER record. Sort of "press to test." Don't expect this system to ever change.

- Look at variety of jobs held and progression to more responsibility.

Comments on the views concerning the AFIT GTM program as it currently stands when considering the job performance of transportation officers.

- I continue to believe the GTM does enhance job performance of transportation officer. It is important and should continue to be important. If the collective leadership doesn't think it is important, we should cancel it and stop wasting a lot of time and money. It think it is worth the time and money--and I work with one or more graduates a year.

- If the Air Force spends the money on these guys/gals, they should be expected to be good.

- It could be a tie breaker when there are two good qualified officers. Actual job performance still carries the weight.

- I see a definite need to improve consideration of the AFIT GTM program when considering job performance. As a recipient of an AFIT graduate logistics student, I have certainly expected masters level performance and currency in systems techniques from her completion of the program.

- If an officer qualifies and elects to go to AFIT he/she is generally intelligent and a go-getter. I have had good experience with graduates.

- The AFIT GTM courses are important only in the early years. Transportation is one level in the logistic's spectrum. A BA in transportation should be sufficient if the individual is going to be a transportation officer his entire career.

- The "should be" can only be attained if there's a traceable link to job vis-a-vis AFIT.

- At least on the initial assignment after graduation, it gives the officer--especially younger officers--a "leg up" on their counterparts when it comes time to assess job performance.

- Given two individuals of unknown quality, I will select the AFIT graduate every time. I believe job related graduate education is far more valuable to the individual and hence the AF.

- We get both good and "bad" folks out of it.

- If you can perform, prove it on the job. AFIT is for learning. Proves only you can read, write, think and have some level of initiative. You prove performance by solving problems on the job.

- The focus must be on effectiveness and potential--not the source.

- Guess I just don't see the relationship. I would assume the additional education would improve performance, but I wouldn't assess the school or course when I'm evaluating an individual's performance.

- The AFIT program itself is not important. If the officer applies anything he's learned it is important in considering job performance.

- Performance is not always reflective of education. I have known several well educated people who couldn't perform on the job.

- I've had a vacant AFIT/ATY position for over a year. I'm dependent on the school graduation schedule to fill it plus hamstring by all the personnel time at station that sends qualified graduates overseas instead of to a HQ position in CONUS where we could get tremendous leverage out of a graduate. The one AFIT graduation I have been able to snag previously was a tremendous asset.

Comments on how the AFIT GTM program can be changed to better meet the needs of the transportation career field and the Air Force.

- Emphasize more real AF material and less quantitative "academic" material which serves only to insure continued accreditation. Courses must reflect the real AF, not what AFIT would like it to be. More transportation material, less other stuff--5 or 6 transportation courses, not 3. Other courses should emphasize personnel management/leadership and organizational concepts. I've yet to use any statistics in my career. Don't go back to civilian institutions. We need to develop war fighting transporters, not peace time traffic managers.

- Continue to have the Military Personnel Center get senior leaders involved to spread the word.

- Senior leadership needs to quit paying lip service and support the program, especially to the instructors who usually get lost in the shuffle; especially for promotions and follow on assignments.

- Program O.K.--but change emphasis on entry to take in more senior captains, majors, and lt colonels.

- A need definitely exists to interface DOD transportation with latest techniques, systems, and strategies of the civilian/commercial industry.

- Concentrate on providing functional management tools which the officer can apply on the job.

- We need people that can apply lessons learned in AFIT. We need to teach application. See Harvard/MIT case study approach.

- Change to logistics career field--incorporate production, distribution/supply, etc.

- Document how the "LOG" course titles pertain to 60XX.

- Rather than allow students to select their thesis topics, the TTAG or WWTC (MAJCOM Directors) should provide topics on which USAF transportation needs research conducted. It would give officers in the program better visibility and make their thesis meaningful if they do a good job. They could even possibly be "targeted" in their next job to follow up on that issue.

- Go back to the CI program.

- Quantitative emphasis is OK but don't go to the extreme. Some interface with civilian industry is beneficial.

- No change, continue to select outstanding and motivated faculty.

- Infusion of new ideas from industry, not just the AF way, is a necessity.

- Formalize the AF "Continuem of Training" concept we've talked about for so long at TTAG. Build the education into the officer's career path.

Comments on how AFIT can increase the interest of transportation officers to apply for the GTM program.

- Continue to use every means available to publicize program. Get MAJCOM/LGTs on your side; they ultimately impact decisions by subordinate offices. Have graduates write articles, letters, etc., attesting to the fact that the GTM program is survivable and worthwhile. Publicize it when GTM graduates are promoted (but beware of the double-edge sword: if they don't get promoted, folks will say the course wasn't worth the effort and didn't help). Get the new LET on board--soon! Also cultivate the MAC/TR--he has a lot of the eligibles.

- Can't push a rope. Young officers need initiative to accept opportunity and encouragement of senior folks to pursue it. AFIT is in an advertising battle. Only thing I can say is keep it up.

- Promotion and follow on assignments that are prime. This requires support of senior leadership. Other services should be invited to attend. A follow on tour at a MAJCOM for senior captains and majors should be invited.

- Stress application to job. Put some flexibility in time allowed for completion--i.e., up to a maximum time of two years in residence to complete--not for everyone, but some periods may be the current 15 months, while others, based on background, timing in career, and desires for courses, should be allowed to tailor an 18-month or maximum of two year AFIT program.

- Probably increased publicity and support through the AF transportation officer career advisor/manager at AFMPC. Some programs such as the masters program and EWI have received consistent coverage at AF/MAJCOM conferences and workshops. The LOG series courses (199, 221, 224, 299) are not mentioned in detail enough.

- Change perception of course. It is considered a very painful method of obtaining a degree. More would apply if course was less quantitative and more functionally oriented.

- Make it pragmatic transportation. Emphasize the "tools" aspect coupled with applications such as case work in: distribution analysis, productivity, work force planning, contracting, and technology applications.

- Transportation officers career field should follow into the logistics career field at the major level.

- Advertise it, support it, crossfeed at Sheppard so students will know about it and seek it.

- Don't ask. Let's have MAJCOM directors hand pick up and coming officers and assign them to AFIT--like any other PCS.

- Interest in any training is directly proportioned to the benefits the attendee believes will accrue or the importance placed upon it by the institution (team community). We must rethink the structure of our training to particular phases of a career. We have attempted to do that but have failed miserably in the execution. Tie school to career progression and better jobs. It will take some work, but can be done.

- Every director has to get personally involved with the officer in his command to identify good candidates and talk to them about applying. MPC provides a list of officers with no advanced degree. AFIT provides information booklets to directors. Directors speak at Sheppard about AFIT. Directors personally contact every officer.

- I think many officers are turned off by the strong quantitative emphasis. There is some concern as to how a MS from AFIT compares to an MBA from a similar school when they enter the civilian job market later on.

- Recognize graduates annually for a special/or significant contribution to USAF transportation. Recognition could be as simple (informal) as a letter or plaque from the AFIT Dean stating--"Job well done" you have enhanced the USAF transportation mission through outstanding leadership and application of your AFIT GTM degree. Send this through the MAJCOM Command to unit, etc. Publish an annual listing of GTM graduates who have been promoted during the most recent year. Possible compare promotion success rates between AFIT graduates and non-graduates.

- Make the course transportation specific, use the AF transportation perspective only.

- There's nothing like making education prerequisite for promotions to generate the required level of interest.

Comments on the views concerning the list of items that the majority of panel members felt were important when considering the career progression of transportation officers.

- How long a rank is held is important only for below and above the zone promotions. Early BTZ promotions tend to lead to subsequent BTZ promotions; hence, an early one may help career progression. Timing per se is not important. However, it needs to be done early in one's career. AFIT MS in GTM far more important than a Webster MA in management.

- It's a good list, but performance is clearly the main one.

- The bottom line is job performance. The AF has adapted this principle again. The other areas contribute to the molding and maturing of an officer.

- Too many items on a scale of 100 to allow for significant discernment between points. I suspect when averaged together, they're all going to be very closely bunched in a narrow band of numbers. Therefore, I'll be surprised if a real noticeable trend emerges.

- Job performance should count for over one third of all listed factors in career progression. Despite the recent de-emphasis on PME, it is vital and necessary for career enhancement, broadening and professionalism. An officer still needs to move around to overseas tours and some changing of MAJCOMs. Job experience should include command as well as staff assignments. LOG PCE courses should play a greater part than in the past in career progression. The source of a masters degree plays third to the timing and type of degree.

- The most important facet of an individual is can they get the job done, do they overcome obstacles. A highly educated individual without the ability to get the mission done is "worth nothing to the unit." Thinking is nice, doing is absolutely essential. The long I'm in this business, I believe "doers" are the most important resource we have. We may need to teach "doing." We give individuals a lot of tools in education but they can't or won't use them. We must refocus on the "doing" aspects of the job. We must couple pragmatism to the education process. Dressing up a "non-doer" in a masters degree only gives me a pseudo smart guy/gal who can't get the job done. But, I fix that with an OPR.

- Length of rank tenure changes radically as a factor if the officer has BPZ promotions.

- No comment on the list except that it is fairly inclusive. One item, "timing of job performance," should be added, i.e., top notch performance as a lieutenant does very little for promotion to Lt. Col or Col. This item could be made more meaningful if a baseline of 100 were used to rate the most important item and then all others rated at a "lesser" value.

- I believe the important factors have been identified. There will always be some others that particular individuals have experienced and feel are also important. Regardless, job performance is where the real effort lies and good job performance is easy to write and talk about. Phoney--trite comments--paper fillers, are not needed then.

- Job performance is number one.

- You want to prove in ever increasing levels and broad areas of responsibilities that you can "get results." PME and advance degrees are tie breakers.

- I have a very difficult time with the simplicity of the question and the complexity of the possible answers. For example, being a great Squadron Commander could be worth 85-90 points, but just being a Squadron Commander could be 0 points--and a poor Squadron Commander worth a minus 1000.

- PME and masters degree used to be much more important under old OER system. Ought not carry the same weight now. And some items (such as overseas tours or changing duty locations) I just find difficult to equate with career progress.

- If an officer can't perform on the job, lead as a commander and pull his/her share of assignments--all else is eyewash.

- Job performance is #1. A hardworking, energetic person can often overcome lack of experiences -- a dunderhead can't or won't. Breadth of experience is next, as this plus time in grade is what provides depth and self guidance to hardworking people. The rest of these items are frosting on the cake that makes for a well rounded top performer.

Additional comments about the questionnaire.

- Bottom line for any officer, produce and your boss (if any good) will support you. For AFIT, keep up the good work. We need your academic leadership.

- Bottom line is an officer needs to consider a number of factors for career progression. Job performance is key. PME is necessary for career broadening and enhancement. Officers still need to serve/promote overseas tours in our career area based on O/S rotation index, it is a form of "paying our dues." The opportunity to command is vital. Additionally, staff tours provide necessary assistance in career progression. The number of MAJCOMs is not a factor. For the good of the Air Force and transportation, an officer should have some working knowledge and experience in several commands, preferably wholesale or acquisition logistics included. In today's environment, a graduate degree should be a must. Additionally, continuing adult education programs such as civilian institution AFIT short courses and other military schools such as Navy/Army transportation development, broadening, and resultant career progression.

- Work longer and harder than others. Pay attention to detail. Seek additional responsibilities. Help your people be better than they think they can. Be positive but flexible. Keep your sense of humor. If you can do all the above, you will be happy and succeed. If you expect to make colonel then you need a little luck in addition. If you expect to make general--you're in the wrong career field--GO FLY.

- Conduct a survey with the civilian industry to see how they view an AFIT degree as opposed to a civilian degree. Then publicize the results in things like MPC's Officer Newsletter, AF Times, etc.

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VITA

Captain David "Randy" Pierce [redacted] He graduated from high school in Mason City, IA, in 1975 and 5 days later entered the Air Force and served for a period of four years as a vehicle mechanic. His duty locations while enlisted included Tinker AFB, OK, and Zweibrucken AB, Germany, after initial training as a General Purpose Vehicle Repairman at Chanute AFB, IL.

After being discharged in May, 1978, Captain Pierce started his college education at the University of Northern Iowa and graduated in December, 1984, with a Bachelor of Technology degree and a major of Power and Energy Technology. During this period of time, February 1980 - February 1985, he was a member of the Iowa Air National Guard located in Fort Dodge, IA. There he held positions in Vehicle Maintenance and Vehicle Reports and Analysis.

Captain Pierce attended Officer Training School in June, 1985, and was commissioned on 21 August 1985. After graduating from Transportation Officer School in November, 1985, he served as the Officer-in-Charge of the Air Freight Terminal at Tinker AFB, OK. In January, 1988, he attended Squadron Officer School in-residence and in May, 1988, he entered the School of Systems and Logistics at the Air Force Institute of Technology.

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The main objective of this research was to determine the factors which are important to the career progression of transportation officers. With these factors identified, the "value added" to an officer's career by attending the Air Force Institute of Technology (AFIT) Graduate Transportation Management (GTM) program can be determined by comparing AFIT and non-AFIT transportation graduates.

This problem originated from the USAF Director of Transportation (HQ USAF/LET) seeking an overall strategy for transportation education to follow in the 1990s and beyond. To fulfill one area of transportation education, AFIT was asked to provide an overall strategy for the GTM program.

To work toward answering such a broad problem, three areas of research were suggested by HQ USAF/LET for initial research. This study provides the initial research on one of these questions, "How have the careers of past GTM graduates progressed since attending AFIT?"

An initial list of factors was identified through a review of literature. The importance of these factors was measured and additional factors added through a two-round Delphi procedure with a panel consisting of 24 senior transportation officers.

The factors, identified from this research, took a backseat to examining the change that has occurred in Air Force philosophy from the "whole person" concept to the "job performance" concept. This change was stressed by the panel members as the number one factor when considering the career progression of transportation officers. Other factors identified as important to the career progression of transportation officers became factors which either affect job performance or relate to job performance.

With the factors important to the career progression of transportation officers identified, the "value added" to career progression by attending AFIT can be assessed. This assessment can be performed through a comparison of the factors between AFIT and non-AFIT graduate transportation officers.